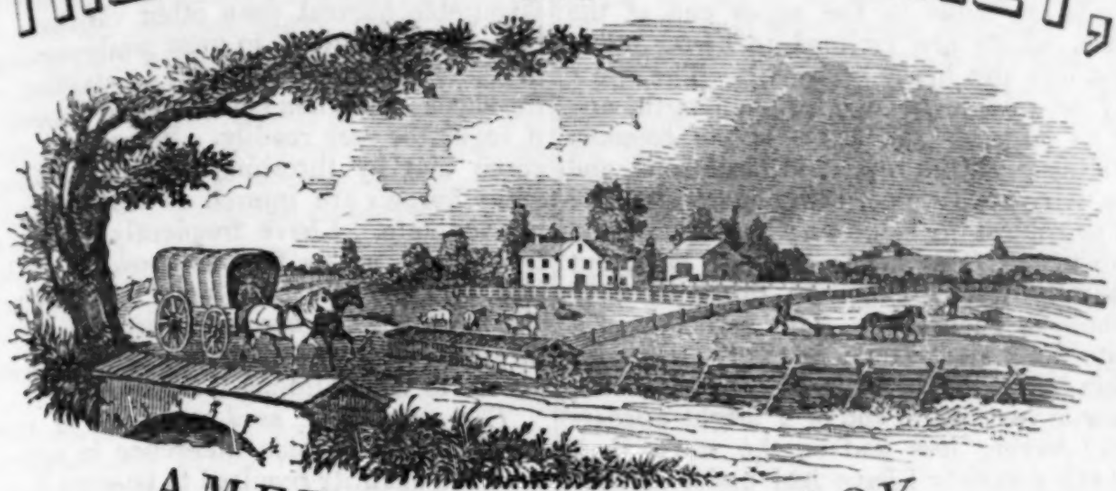
THE FARMERS' CABINET,

AND



AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—LIEBIG.

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BY JOSIAH TATUM,

EDITOR AND PROPRIETOR,

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Report of Experiments on the varieties of Wheat cultivated in the State of New-York.

[For which experiments a premium has been awarded by the N. Y. State Agricultural Society.]

By RAWSON HARMON, Wheatland, Monroe Co.

We had intended, from month to month, to publish the following Report, &c., but have not till the present time, found the opportunity. The statements and observations are not only interesting to our agricultural readers generally, but practically valuable to wheat growers. To be able to make choice of the variety of wheat adapted to his location, soil, and mode of cultivation, is one of the important arts of the farmer, and gives room for the exercise of a good deal of judgment.—ED.

THE culture of wheat has called forth the attention of the agriculturist in the temperate zones more extensively than any other grain.

The *varieties* have been extensively multiplied—each variety has its advocate. The varieties cultivated three thousand years ago, appear to have been much inferior to some of the varieties of the present day. The quantity was probably greater than that obtained from some of the most valuable varieties of the present time; but the grain was coarse, containing much less of the essential qualities of good wheat—gluten and starch. The varieties cultivated at the present day, appear to have as great a difference in their quality, as there was between that cultivated before the Christian era and the present time.

White Flint.—The origin of this valuable variety is not certainly known. It is claimed that it was introduced into New Jersey from Spain, in 1814, and from thence spread through many of our wheat-growing districts. It is likewise claimed to have been brought from the Black Sea into New York, about the same time. The supposition that it originated in the town of Rome, Oneida county, in this state, where it was called Mud Flint, from having been found growing on muck soil, is not entitled to serious consideration. Its first appearance in Western New York was about twenty-five years since.

The strongest probability is, that it was first brought from the Black Sea into this State. Its origin is of less importance than the proper appreciation of its value to the cultivator. It is generally acknowledged to be one of the most valuable varieties that has been introduced to the wheat-growers of the Northern States.

Description.—The chaff is whiter than in most varieties. A few short and soft beards are found in the upper end of the heads, which are inclined to droop somewhat like the heads of barley. The straw may be said to be of medium length, and not as large as the straw of the common varieties. At the root it is more solid, and of a wiry appearance, being more stiff and not as subject to lodge as when it was first introduced. The heads are not long, but generally well filled, with thirty to forty kernels in each head. The kernel is of a white flinty appearance, and very solid, with a thin bran; the berry is of good size: the straw is very white and of a bright appearance; having less leaf on the straw than any other variety I have had under cultivation. There is one peculiarity about this variety not met with in any other with which I am acquainted: that is, the tenacity with which the berry adheres to the chaff in its chamber. It must be very ripe to waste by shelling when cut, and when threshed, but little of the chaff is separated from the straw. The only objection to this variety when first introduced, was, that it was difficult to tread it out with horses, or beat it out with the flail; and then the white caps adhered so closely to the kernel that it was frequently complained of by the millers. But on the introduction of threshing machines, this objection was entirely removed, for in passing through the machine, the chaff is completely torn from the berry. That which was formerly a strong objection, is now considered a decided advantage, as it does not suffer by standing until it is fully ripe, and gives the wheat-grower more time to secure his crop without loss.

When it was first introduced, it was mostly sought for to sow after corn, or on land not well prepared, and on thin and light soils—seldom being affected by the frost of winter, except on some bleak points where the snow is off most of the winter, or where the snow would blow on and remain in heavy drifts till late in the spring—where, in fact, no variety that we have introduced could succeed.

This variety has withstood the Hessian fly better than any other now cultivated. The solidness of the straw at the root, gives the fly less chance of destroying it, as it is not as easily eaten off when the berry is filling—the time when wheat is most injured by the fly. Some of the stalks of this variety will be so eaten as to fall down yet mature the berry; while in other varieties, after it has fallen from the injury of the fly, the greater part of it fails to mature.

The hard and flinty berry is not easily affected by the rains, and it is consequently less subject to grow from exposure in an unfavourable harvest than other varieties. I have never known it to grow while standing in the field, and seldom while standing in the shock; but when committed to the earth, it vegetates very readily. Some have supposed that by threshing it in a machine, many kernels are injured so that they will not vegetate. I have frequently threshed a few bushels with a flail, and sown it side by side with that threshed with the machine; and have not yet become satisfied that the threshing with the machine has proved injurious to wheat intended for seed.

The amount of seed and time of sowing.—There is some difference in opinion as to the quantity required to be sown to the acre: first, we must take into consideration the soil, its quality—for on that much depends—and the time of sowing—on clay loam soils, the first week in September is the best time for this section of the State. It is important to have it take a good root before winter, and if sown earlier, the fly is very apt to destroy some of it in the fall; and if it should be so large as nearly to cover the ground the last of October, it should be eaten off by cattle or sheep, as it is less liable to be injured by deep snows. Here one bushel of seed to the acre, is as good as more on soils in good condition; if sown ten days later, add one peck more seed per acre. On sandy, gravelly loams, the second week in September is the time most favourable for sowing: if earlier, the fly is very apt to affect it, so as to diminish the crop. Wheat, on such soils, appears to suffer more from the fly, than on clay soils. On these soils, one bushel per acre; and if the soil is not in good condition, one peck more should be sown. The White Flint spreads or tillers more than the common varieties; and when I have sown a bushel and a half the second week in September, it was too thick, the straw fine, the heads short, and the berry not as large and fine as it would have been, if one peck less had been sown to the acre. There is one advantage in sowing thick on soils where it is subject to be affected by rust; it will ripen two or three days earlier. That is an important consideration on soils unfavourable to the early ripening of wheat.

The yield per acre.—While this kind of wheat has been generally received with great favour, as one of the most productive varieties, the shortness of its head has by some been thought an objection. I believe the head is as large in proportion to the size of the straw, as the other varieties. The amount per acre here, on common soils, is

twenty to twenty-five bushels; it frequently exceeds that on strong soils, and in some instances has reached thirty, thirty-five and forty bushels per acre. In one instance in this town, twelve acres produced 648 bushels, being fifty-four bushels to the acre; and the greatest yield ever known in this county, 68 bushels 43 lbs. per acre, was from seed one half White Flint, the other half of Red-Chaff Bald.

Its quality.—This variety is held in high estimation wherever it has been introduced. The millers give it the preference over all others. Its white flinty character and heavy berry make it tell in the half bushel—the pure wheat weighing from 63 to 67 pounds to the bushel. When cut before fully ripe, it is from one to three pounds heavier per bushel, than when fully ripe.

The following appeared in the Monroe Democrat, of November 28th, 1843:

"SUPERIOR WHEAT.

"*Messrs. Strong & Dawson:*

"GENTLEMEN,—We do not recollect noticing in any of the newspapers in this section of the country, a word about the superior quality of wheat raised last season.

"We received at our mill, yesterday, a parcel of wheat raised by Moses Smith, of the town of Brighton, which was of so nice a quality that we were induced to weigh it, and found that a sealed bushel weighed 67 pounds. It was of the pure white flint species. We have, in a number of cases during the fall, received parcels which weighed 63, 64 and 65 pounds; but the parcel above named, was decidedly the best we have seen. We are well convinced, that in order to secure a plump and heavy berry, there is a particular time to cut wheat, which point is well deserving the attention of wheat-growers. We send you a sample of the wheat, which is well worthy of inspection.

"SMITH & ALLCOTT.

"Rochester, Nov. 23rd, 1843."

The time of cutting.—To be the most valuable for the millers, wheat should be cut as soon as the berry has passed from its milky to its doughy state. Wheat cut then, contains more of the gluten and less starch; if suffered to stand till the berry becomes hard, the gluten is diminished, and the starch is increased, which reduces the quantity and quality of the flour; but for seed, it should never be cut till fully ripe. Starch is more valuable in its early vegetation than the gluten. One cause of the increase of smut, of late years, is the cutting of wheat intended for seed too green. Wheat cut before it is fully ripe, should not be sown.

If wheat-growers would adhere strictly to the sowing of no seed that is cut before it is fully ripe, they would find smut disappearing without the preparation of brine and lime. The farmer that neglects to brine and lime his seed wheat, does not look to his best interest. Smutty wheat is much improved by not cutting until fully ripe.

Quantity and quality of flour.—The White Flint wheat is the most valuable variety that has been introduced into Western New York, for the quantity and quality of its flour. Its soft mellow feel, and its richness, give it the preference over flour made from any other variety. Several of the New York papers have noticed the fancy brands in the seasons past. The Journal of Commerce, of Nov. 3rd, 1843, gives the following description of fancy brands:

"*Choice Brands.*—A few years ago there were several of the Genesee millers, whose flour, running a little above the inspection standard, was termed Fancy Brands, and sold at a York shilling above standard brands; but more recently that distinction has been surpassed by one much wider, and has ceased to be regarded. There are now several mills in the Genesee country, and in Ohio, which make flour quite above the standard brands. It commands four, and even six shillings, more in the market.

"This fancy flour is not often quoted in the price current, but is eagerly sought for by those acquainted with it, and ought to be by all Americans who would like to be conscious that their bread and pastry are rather better than any of the princes of the Old World can command. We have used several of these fancy brands, the best of which we see is marked on the head, Hiram Smith, Wheatland, Genesee. This brand took the first premium at the late fair, and the biscuit made of it testify that the committee made no mistake. The standard brands of Genesee, Ohio, and Michigan, are all excellent; but these fancies, for domestic use, we must think, surpass them more in quality than in price."

The New York Tribune of November 13th, 1843, in noticing the market, says:—"the first premium of the American Institute has been awarded to the sample of Hiram Smith's flour, exhibited at the late fair; and it well deserved it for its excellence in the two best characteristics of flour—colour and strength. It is manufactured with great care, in one of the best mills in the country, with a determination that it shall stand as well as the best in the consideration of the buyers of fine flour." Mr. Smith being a practical miller, having one of the best mills in the country, with a new and supe-

rior smut-machine of his own construction, and being located in the vicinity where the White Flint wheat is most exclusively cultivated—with such materials, he could hardly fail of standing unrivalled in the market.

Improved White Flint.—This is claimed as a new variety. It was obtained by careful selection from the best White Flint, and sowing on a sandy, gravelly loam soil, intermixed with limestone. The seed has been prepared by brining and liming. The berry has become larger, of more uniformity in size, bran very thin, and the flour the same as the White Flint. My seed wheat weighs sixty-four to the bushel, and the yield of flour is superior to any other. Where I have sold for seed, it has universally been held in the highest estimation. The last three years, I have sold extensively for seed. The past year, I have had orders for it from seven different States, the District of Columbia and Canada: and where it has been tried, it has given the greatest satisfaction. In August, 1842, I sold J. Cook, of Byron, Genesee county, forty-seven bushels for seed. In a communication from him, dated October 28th, 1843, he says he commenced sowing his wheat the 7th of September. "The wheat came up quickly, looked well all the fall, stood the winter well, and grew well till harvest, and the product was 33 bushels per acre: the quality was very fine. I sold over six hundred bushels for seed, at one dollar per bushel; and had I been at home, I think I could have sold every bushel of it for seed, at that price—1254 bushels. We have had it ground for family use, and better flour I never saw. It has fully answered my expectations, and I am highly pleased with it. I think it would have given a greater product, had I not sown it so thick. I sowed five pecks to the acre, and it was much too thick. I sowed last year sixty-five acres with your Improved Flint, Indiana and Hutchinson wheat, and I shall get about two thousand bushels; the Flint yielded a little the most."

A wheat-grower on the east shore of the Chesapeake, Maryland, to whom I had sent sixty-three bushels of seed, says it had a better berry and gave a better yield than any other, and he had sold nearly every bushel of the product for seed.

I carried a bag of my Improved Flint to Hiram Smith's mill: he has ground it, and in a note he says: "The bag of wheat you left to be ground, contained two bushels and eighteen pounds. It has produced one hundred and six and a half pounds of flour, and thirty-one pounds of bran and middlings; loss half a pound. It was too small an amount to give a fair test of its yield. From one hundred bushels of such wheat, I am confident I can make twenty-four and a half barrels of superfine flour. Yours, &c.,

"Hiram Smith.

"Wheatland, Dec. 12th, 1843."

We have made use of the flour, and find it equal, if not superior, to any flour that we have had this season; and we have had none but superfine, from two of the best mills in this vicinity.

White Provence, from France.—Heads, middling size and bald, chaff of a bluish cast; berry, very large and white, bran thin, yielding flour well, and of a good quality. This is one of the most beautiful samples that I have had under cultivation. From its first coming up, it comes forward faster than any other variety I have seen—so much so, that it can be distinguished from all the others. The blades are larger and longer, spread more rapidly, producing more straws from a root: it stands the winter well, is not injured by the insect, and ripens four or five days before the common varieties, yielding well. In one instance, one peck was sown in October, after corn, on less than one-fourth of an acre, and the product was eleven and a half bushels of most beautiful berry, at the rate of forty-eight bushels to the acre.

The only objection I have to this variety—it falls down more than any other. The straw is small, long and soft, with heads large in proportion to the size of the straw, and well filled.

Old Red-Chaff.—This variety was introduced into Western New York more than forty years ago, from the lower part of Pennsylvania, and for more than twenty years it was the favourite variety, and has produced some of the heaviest yields known in this vicinity. Red chaff, bald; straw, long, seldom lodging; berry of a good size, and weighing from 60 to 63 lbs. to the bushel—white, and bran thin, producing flour well, and of a superior quality. On new oak lands it is now one of the best varieties that is sown. On old lands, of late years, it appears to have lost some of its former qualities, being more subject to rust and mildew. The insect attacks it more freely than some others, and it has suffered by severe winters. At present it is not sown as much as formerly.

Kentucky White-bearded, better known in Western New York as Hutchinson, or bearded flint, or Canada flint—was introduced into Cayuga county by Mr. Hutchin-

son, and has been sown extensively the last five years, and now is the favourite variety with many. The two years that I have tried it, it has not equalled the improved flint. On clay soils, or where wheat is late in ripening, it may be valuable, as it is supposed to ripen earlier than other varieties.

With me, when sown on the same soils, and at the same time with my flint, it has not ripened any sooner.

This is a white-chaff bearded wheat, heads short and heavy,—it is called club wheat in some sections—and well filled, with a short white round berry, weighing from 60 to 65 to the bushel. The berry being short, packs close in the half bushel, yields flour of good quality, but will not come up to the improved flint. Bran is thicker and more brittle, and will not admit of being ground as close; if it is, the flour is more specky, exhibiting small particles of bran. If it is not cut before fully ripe, there is a loss in harvesting, for it shells very easily. Every touch of the long stiff beard shells it out. It stools or tillers out but little, requiring from one and a half to two bushels of seed per acre. The straw is stiff, and seldom lodges. On river flats and rich soils, when the common varieties would lodge, this will not get down. Insects affect it more readily than they do some other varieties. The heaviest yield of wheat that I have heard of this year, was from this kind. It is somewhat liable to smut, owing to its usually being cut green; this straw being thick, it matures more after it is cut than most kinds.

Indiana Wheat.—This variety was introduced from the State that bears its name. White chaff, bald; berry, white and large; bran thin; the berry not as flinty as the white flint, having more of the appearance of the improved flint; some of the best quality weighing sixty-four to the bushel, producing flour of superior quality and quantity; straw is larger and longer than the white flint; ripens about three days sooner, shells easy, so that there is considerable loss if it remains in the field till fully ripe. It is well adapted to strong soils. On the farm of J. Cook, of Byron, it has averaged thirty bushels per acre for ten years; but with me it has not proved as well as the flint. Its early ripening makes it valuable on late soils. This grain the insects have attacked more than the flint, and it is more liable to be winter-killed.

Velvet Beard or Crate Wheat.—This is an English variety, and was introduced into Western New York about sixteen years since. This is a reddish chaff, bearded, with a large red berry. The straw is large and long. Heads long and well filled; long and *very* stiff beards, producing well on strong soils. It requires to be sown one and a half bushels to the acre, as it does not spread as well as some other kinds. It is sown mostly on the strong soils of the Genesee flats; being very hardy, and straw stiff, it is not subject to be thrown out by the frosts of spring. With its stiff straw, it seldom gets down. The berry heavy, weighing from sixty to sixty-four to the bushel. It is fifteen per cent. inferior to the white wheat, in the quantity and quality of its flour. Flour made from this wheat is of a yellowish cast. It will admit of being sown the last of August, being seldom injured by the insects or strong soils.

(To be continued.)

Extracts from J. S. Skinner's Address,

Delivered before the Agricultural Society of New Castle Co., Del., at the Annual meeting, held in Wilmington, September 11th, 1844. *See last No. p.* 149.

I SHOULD not fulfil my duty were I not here to relate something of what I observed last week in old Massachusetts, where, short as my sojourn was, to meet my engagement here, so much occurred to fill me with admiration and personal gratitude. Not from any view to invidious comparison, but to stimulate you to inquiry and reflection, note was made of the progress of a single town whose situation is analogous in some striking respects to Wilmington, especially in local advantages, in vast water power, and in vicinity to a large city of enormous wealth like Boston, whose capitalists, with an enterprise and sagacity all their own, leave no resource neglected that art and opulence can make available. I was in that venerable State when Lowell was little more than a farm. The oldest of their manufactories was chartered in 1822, and on the 1st of January last, there had been consumed within the past year, of cotton, 22,880,000 pounds. The monthly wages distributed in cash, were $150,000; one establishment alone, the Middlesex mills, manufactures the fleeces of 1200 sheep daily; and through the year, American wool of the finest quality, of the value of $500,000. The same establishment consumes annually 15,000 gallons of American lard oil, besides 7000 gallons of sperm oil brought by American vessels—four millions of teazles of American growth—eight hundred tons of Pennsylvania coal, besides other articles of American production, and of the value of more than half a million—giving steady employment to 850

hands, who are paid monthly in cash. The machinery is all American in manufacture and principle. The capital embarked in this one establishment is $750,000, and what constitutes the salutary distinction between American and English establishments of this character, the practical operatives who daily work in the Middlesex mills, own $60,000 of the stock. Lowell, which, as I before said, was scarcely more than a farm when I was last in Massachusetts, now boasts a population of 25,000 people, and to crown the whole they levy on themselves, and pay without grumbling, a school tax amounting to $24,000 a year. Note in all this, my friends, the mighty energies of an industrious, economical, educated people!

I was pleased to learn, from one of the accomplished and liberal proprietors of the works to which I have particularly referred, that the descendants of the fine-wooled Saxony sheep transplanted to Ohio, were supplying his mills with wool of longer staple, and equally fine as that of the original stock.

To return to the causes of your slow progress in population and the obstacles presented by it to a more general diffusion of the knowledge necessary to a high cultivation of the art of husbandry, to say nothing of one great drawback which cannot now be reasonably applied to Delaware or New Jersey, there are yet other causes of blight which seem to have stinted the growth of the old States on the Atlantic slope south of New England, sufficiently obvious and remediable to warrant me in referring to them. Among the most prominent is the inherited habit or prejudice of mistaking and going for *quantity* rather than quality of land, which pervades the region referred to, and which is said by some to be the monomania of the Saxon race. How many are there who own from 300 to 500, and even more acres of land, of which one-third, or at least one-sixth part, lies totally unproductive in useless brush-wood, in uncleared swamps, or in land rendered worse than profitless, for want of proper draining! the owner not seeming to remember, that for every such acre not yielding something in grass, in pasturage, in tillage, or in growing timber, he should charge himself, as with so much lost or thrown into the fire or the sea. Of how much more are men robbed by their own indolence and short-sightedness, than by thieves who break in and steal.

There is no mistake more common than that of supposing that the more land a man has, the greater must be his profits—forgetting that the profits arise not from the land itself, any more than from an idle mill or an empty ship, but from the skill and manner of using it:—and so indispensable is capital in the business of farming, that in general it may be laid down as an axiom that money employed in agriculture, will yield an interest in an inverse ratio to the area to which it is applied. Thus, if $100 be expended, and yield ten per cent. on ten acres, the probability is that it would yield much more if applied to half that area. In England, where this matter is so well understood, the land-steward of the Marquis of Stafford, a practical man, being asked the amount actually required to stock and carry on a farm, said that in Staffordshire, a farm of 250 acres medium quality land, bearing a proportionable quantity of good, fair, and inferior qualities, and one-fifth in permanent meadow, would require a cash capital of $12,500 in an ordinary state of entering, and an additional capital in proportion to the estimated extent of any improvements to be effected in the way of road making, fences, and under-draining.

Numerous instances must be familiar to all who hear me, of the wonderful effects of *lime* and other manures, in enhancing the value of Delaware lands, especially since the establishment of this Society, and the excitement and rivalry produced by it—raising it in many cases from $5 and $10, up to $50, and even $100 an acre. I will detain you to mention but one instance of the efficacy of lime, and of the necessity of some chemical knowledge of the nature of manures, soils and crops, related to me on undoubted authority since I left home to meet this engagement.

Mr. Collins, residing on Scuppernong Lake, in North Carolina, a gentleman of large fortune, and, to his honour be it mentioned, as it does not *always* follow, of liberal temper, had a large field of rich black alluvial soil, which yielded heavy crops of Indian corn, but, as often happens, was ill suited to wheat, producing not over 13 bushels to the acre. He purchased and applied to this land 250 bushels of lime to the acre, and then reaped 47 bushels of wheat! For this lime, the refuse of kilns on the Hudson river, brought into Ocracock as return freight, by lumber vessels trading to New York, he gave 10 cents a bushel. This made, you will perceive, an outlay of $25 capital to the acre, at a single dash; but mark the result! Deducting 13 bushels, the most that land of the same quality alongside of it produced, and there remained 34 bushels of wheat against $25; the land being left permanently impregnated with an elemental and alimental ingredient and food for that noble grain, of which, with all its capacity for producing other crops, it was

until then nearly destitute. Most of you are doubtless familiar with instances of the efficacy of capital applied in like manner.

When it is considered that labour becomes cheap, or what is the same thing, more productive, exactly in proportion to good tillage and the richness of the land combined, either naturally or by force of the manure applied, is it not self-evident that if the owner of unproductive land cannot otherwise command the requisite capital, he had better sell off one half for the means of improving the remainder, rather than retain the whole in a state of paralysis, that he may vainly boast, "I am monarch of all I survey," even though it be but a barren waste. No spider in the midst of his web, is more circumspect of whatever approaches, than is the capitalist in the midst of his strong boxes; and if the farmer, whose all is in land, cannot by force of his character for economy and intelligent management, command the requisite capital, and will not alienate, had he not better divide at once among his sons, giving to each if it be but 50 or 25 acres, with a set of centre-draught ploughs, together with a subsoiler, a pair of mules, or a span of New England-like oxen, and a *drag-log;* and thus instead of running riot for want of employment, or going to seek through a life of exposure and hardship a precarious livelihood on the frontiers, his children would cluster around him, constituting, as well in the vigor of manhood as in his declining years, his safest friends and most delightful companions. Not a week since, having the pleasure to pass a delightful day, in company with the enlightened, liberal, and zealous editor of the New England Farmer, and other gentlemen distinguished for intelligence and character, at Indian Hill Farm, the residence of Col. Benjamin Poore—Poore in name, but rich in all the qualities that "give assurance of a man"—I heard him remark that, as a young man, beginning life, to make his way by industry, and without capital, he would sooner commence on *one acre* than on one hundred. You may estimate the weight of his authority when I add, that he took the premium for not only the *best managed farm* in the State, but for the *best specimen of under draining* on a large scale, and for the *best system of keeping farm accounts!* There were among other proofs of uncommon energy and skill, about forty acres of originally worthless waste land, which he had so reclaimed as to produce two and a half tons of the finest hay to the acre, while his own flourishing plantation of forest trees, concealed and ornamented rocky precipices inaccessible to the plough.

Management of Hens.

The Kennebec, Me., Agricultural Society having offered premiums for the best management of fowls, two competitors gave statements of their mode, and as they contain useful hints we copy that of Mr. Child, so far as relates to management.—*Boston Cultivator.*

From the statement of James L. Child:—

My hens laid nearly as well during the winter as in the warm weather. Their habitation was warm, and so constructed as to bring them to the ground, where they found at all times a good supply of old plastering, ashes, pulverized oyster shells, charcoal, fresh water, once or twice a week, beef liver, or some other kind of meat. I feed chiefly upon baked or boiled potatoes, giving their food to them warm in the morning and at night, occasionally dealing to them a little corn or oats, and giving them all the crumbs, and skins, and fragments of the cooked vegetables. To prevent their being infested with lice, about once a fortnight I mixed in dough, so as to discolour it, a quantity of flour of brimstone, which is a sure preventive as well as remedy, and may be safely given in small quantities to young chickens, for the same purpose.

It will be seen from my mode of keeping my hens, which average about twenty-five and three roosters, through the winter, that I cannot give the precise cost of keeping, but I am satisfied that potatoes may be given, as a general food, and fowls kept cheaper in this mode than in any other—and they will always be ready for the spit, if not stinted in quantity. I find my fowls fat at all seasons.

I estimate that my hens afford me from their eggs, without regard to their meat, a clear profit of 50 per cent. I confine them to their yard, hen-house, and barn cellar, during gardening, and to their house and cellar in the winter, and think with that degree of confinement, they lay better than they do when allowed to wander at large. Hen houses and roosts should be kept neat, and often whitewashed, and their nests should always have half an inch or more of ashes or lime on the bottom, under the hay. Broken or rotten eggs should never be allowed to remain in the nests. Dirty water should not be given them. To do well, they require pure water, and all their food fresh and uninjured from taint or fermentation. I estimate that during the year,—deducting the time of their moulting, and inclination to set,—I have got daily, one half as many eggs as I have had laying hens.

Every family can, with a very little trou-

ble, with their flock of a dozen hens, have fresh eggs in plenty, during the whole year, say in all, 2000, and 100 full grown chickens; and of all the animals domesticated for the use of man,—if such be the fact,—the hen is capable of yielding the greatest profit to the owner. It is a pleasant recreation to feed and tend a bevy of laying hens.

Care should be taken to change roosters often, as otherwise the best variety in the world will run out, and cease to be profitable from breeding in and in: and I feel great confidence that much improvement may be made by due attention to crossing, and in this way some of the evils from breeding be averted. I have stated that I give my fowls meat: this is indispensable, if they are not allowed to go at large. If corn is fed out, it should be soaked, and 15 bushels is a fair yearly allowance for 12 hens and a rooster. But they should always have food by them, and after they have become habituated to find enough at all times in the trough, they take but a few kernels at a time, except just before retiring to roost, when they will take nearly a spoonful into their crops; but if they are scantily or irregularly fed, they will greedily snatch up a whole crop full at a time, and stop laying, and not unfrequently engender some fatal disease.

From the Central New York Farmer.

Shepherd's Dog.

Messrs. Editors,—According to promise, I send the description and character of my Shepherd's dog. He is of humble pedigree; his dam was of a poaching disposition, caught pheasants on their nests in the summer, and was shot by the game-keeper, after producing Boxer under a manger. His sire was of a similar kind, caught hares in their forms when out on duty, and although owned by the shepherd of a nobleman, even the influence of aristocracy could not save him; he was hung for his transgressions, although he procured his master many a luxurious meal, and he gave Boxer a good education.

Boxer's phiz is rather a remarkable one; though not beautiful, there is an animated and intellectual look in his eye, and appearance of quick imagination before action, that make him interesting; he is of medium size, a long curly coat, and without a tail, a good criterion of the true kind.

This dog is one of the most faithful and affectionate of the brute creation, and I should say knows as much as many of the human race. His temper is exceedingly docile, except when imposed upon, then he will defend himself with true courage; going through the city, twenty dogs may run, bark and growl, but Boxer will turn, give a counter snarl, and bid defiance to all.

He will go round any lot on the farm, and fetch every sheep to you, and keep them together until you examine the whole flock, or take any number from it. He is generally very obedient, and a more industrious animal never stood on legs; he is more useful in driving a flock of sheep than three men. If his assistance is required among the cattle, he will take them to any point required, and he knows a strange animal equally well with myself. Boxer is no friend to hogs; if he sees one on the premises, out of the stye, he is off without orders. If the peacock, fowls, turkeys, or ducks, enter the garden, Boxer discovers them, or if a whistle is given, they take to their wings or legs immediately. Should the geese enter any of the lots, a whistle will soon bring them into the road. Once show Boxer the proper place for an animal, and he will always bear it in remembrance. Make him understand what you want him to do, and he will perform his work with great sagacity.

It is sometimes my practice to let my sheep in the road a few hours in the day, when the feed is good, and take them at night to very short pasture, to leave the manure they collect; one evening Boxer going to fetch them, brought all but one; as soon as they had entered the gate, he barked at the shepherd, and walked toward the lost sheep, the pastor followed him to a fence where a lamb was fastened; had he remained, he must have died before morning. Two flocks of sheep came to the washbrook at the same time, into one yard, Cotswold and Merino. Boxer kept the division equally well as a board fence, not a sheep escaped from either, the whole time of washing. The old dog did this with much judgment, and in a very quiet way, and the good acts he had done elsewhere, elicited many *compliments from his friends and "acquaintances."* Give Boxer a fair chance at a rat, and he is certain death. A "*skunk*" must die, notwithstanding its odor; a woodchuck must run, if he has far to get home; and a dog must fight,—and bravely too,—if Boxer catches him among the flock.

He comes to his meals as regularly as the cloth is laid, and if he is not noticed, he will put his paw on each at table, until he is fed. He fares as well as his master, who is perfectly aware of his partiality and sterling worth, and well compensated for every meal. He is a more interesting companion than many who call themselves men. Boxer

sleeps before the fire in the evening, and has nothing to disturb his tranquil repose, but the caresses of his friends—at night he guards the premises—not a thing moves without his knowledge—and a "*thief*" must take care of his "*breeches*"—the midnight solitude finds the old dog watching. He is a dog of all work, a general favourite, and never flinches from his duty, but manifests eagerness to do it. If the old dog could speak, he could tell a good tale on sheep. If he could flourish a pen with his paw, he could distinguish the *different breeds of cattle*, equally well with many writers who profess to know; therefore I shall bestow the praise and commendation, and to say the least, he is a great dog. I have been offered one hundred dollars for him, but my "*last shilling*" must go before we part; there is a tie between him and me, that even the power of money cannot sever.

WM. H. SOTHAM.

Hereford Hall, Nov. 10th, 1844.

Keep your best Stock.

MANY farmers are in the habit of selling their best animals, as they will bring the highest price. A greater mistake cannot be made. A difference of ten or even twenty per cent. in the price of a single animal, is a small affair compared with this difference in a whole herd. By keeping the very best to propagate from, the whole may be made of equal excellence, and in the course of a few years, numerous animals might be produced having the excellent properties that now distinguish some few of the best.

What should we say of a farmer who has several highly valuable varieties of potatoes, and other kinds that are inferior, and for the sake of ten cents extra a bushel, he sells for consumption all his best varieties, and plants those that are inferior, when in consequence of this imprudent measure, his next crop will fall short twenty-five per cent. Every one will condemn this course, and few, if any, are so wanting in discretion as to pursue it; yet many take a similar course in selling their best animals and propagating from the poor.

For the purpose of work, beef, and the dairy, there are probably no cattle superior to our native breed, where attention has been given to improve them, though some improvement for certain purposes may be made by a cross with foreign breeds, that excel in the qualities desired. There is a vast difference in our cattle in sections where much attention has been given to improvements by selecting the best, when contrasted with those where little or no attention has been paid to the subject, and as a matter of course, the best have been sold, or eaten up, because they were the fattest. Every man that raises stock has it in his power to make improvements, and he should avail himself of all the advantages around him to turn this power to the benefit of himself and posterity.—*Boston Cultivator.*

American Provisions in England.

THE following condensed from a letter published in the Mark Lane Express, from J. & C. Kirkpatrick, of Liverpool, appears in a late number of the Cultivator.—ED.

THE strong prejudice which at first existed against American provisions, and for which there was good reason, in the inferior quality of the earliest arrivals, has been gradually removed, as shippers have learned to conform their brands to the wants of the English market.

Beef.—Great difficulty has been experienced in securing a footing in the British markets for this article, owing to the prejudice which the inferior character of the first shipments naturally produced; but the imports have been latterly of better quality. The Americans may have the *exclusive* supply of this article, if they will avoid the faults in cutting and packing which have formerly attached even to their best brands. Complaint is made that some of the late parcels were very dark in colour, supposed to have been caused by a bad quality of salt, or badly seasoned casks. The casks have generally been made too large, allowing the meat to roll about; they should be made of such size as to admit the required quantity with tight packing, leaving room for a good heaving of salt. The meat too has often been most irregularly messed, the pieces being of very unequal sizes, whereas they should be cut as nearly as possible eight lbs., and should be cut square and compact.

Pork has had less difficulty in finding its way into the English market, and less care has consequently been taken by curers in properly packing it. The position of the trade is therefore about the same that it has been for two years past; but it is capable of great extension if due care is only taken to suit the market. *Prime mess pork* should consist of 50 pieces of four lbs. each, from hogs weighing 160 to 200 lbs., every part being packed except the head and legs. It is important that the meat be firm and well fed, and free from the oily character which American pork generally possesses. It should remain 36 hours after being killed, in order that it may become quite cold and firm, before it is packed.

Cheese.—The import of this article to Liverpool during the last twelve months, was somewhat over 1,400 tons; while the steady and progressive increase in the trade gives promise of a much extended import in coming years. The general quality of American cheese, shows that the soil of the United States is well suited for its production, and which makes it the more to be regretted that the very obvious *defects of make*, which have so much operated against its more extensive introduction into England, should not be remedied. This might easily be accomplished by the circulation of proper instructions on the subject, among the farmers in the cheese-making districts *in America.* Of these defects, the principal arise from a too hurried manufacture, and insufficient pressing, which, by leaving the whey in the cheese, not only injures the flavour, but renders it more liable to decay, while the same cause makes it open and porous, a fault particularly objectionable. The make of English cheese has never been equal to the demand of this country; and the home supplies have, consequently, been supplemented by large yearly imports of Dutch. There is now, however, every prospect of the required supplies being drawn largely, if not principally, from the United States instead of Holland; the diminishing import from the one, and the rapidly increasing import from the other, already indicating such a change. As regards the form of the cheese, it is desirable that they be made of less breadth and greater depth or thickness, which would both conform them nearly to the appearance of Cheshire, with which they have to compete, and would also fit them better for passing through the ordeal of a long sea voyage.

Wheat flour.—The result of the harvest is now pretty well ascertained, and it may be said with confidence, with regard to wheat, the great staple of England, there has never been a more abundant harvest reaped, while the excellence of the quality is fully equal to the abundance of the yield. Oats rank next, but are below an average. Barley and beans, in consequence of the drought, were a very short crop. The *abundance* of the wheat crop will, however, compensate for the deficiency in the other, and low rates for that article at least may be looked for. The reduction in price has already advanced the duty to its highest point, 20 shillings per qr., and at which it is likely to remain through the winter, so that the stock of United States flour held in England, and which in Liverpool alone amounts to 140,000 barrels, must remain in bond till next summer at least, with the exception of what may be required for export. The result, so far, of this season's importation from Canada, shows that the object contemplated by Peel's corn-bill of last year, has been fully secured, *in drawing to the river St. Lawrence a considerable portion of the produce of the Western States of America.* A late return shows that the exports from Canada, up to August this season, were 307,000 barrels of flour, 237,600 bushels of wheat—the exports to the same period of last season, having been 50,000 barrels of flour, and 15,000 bushels of wheat.

German and Brazilian Hens.

We were pleased with seeing a pair of German hens the other day, which Mr. Eaton obtained from a friend in Massachusetts this fall. They are a large, stately fowl, of a greenish black colour, having little or no combs. Their heads are furnished with beaks more hooked than common hens—more of the crow form. They are reputed to be good layers. The Boston Mercantile Journal has the following relative to this breed of hens and their eggs:

"We have received from a subscriber, a couple of hen's eggs of immense size—being a specimen of the productions of a breed of hens brought into this country from Guilderland a few years since, by Capt. John Deveraux, of Marblehead. They weigh three ounces and three-quarters a piece, and measure seven and three-quarter inches in circumference one way, and six and a half the other. If any one has any larger hen's eggs, bring them along!

"We learn that these Dutch fowls are of a large size, some weighing seven pounds a piece; may be easily fattened, are delicate food, and first rate layers. Their eggs are usually one-third larger than those of our ordinary fowls. One of the hens which Capt. Deveraux brought home, laid 160 eggs in so many successive days!"

Mr. E. has also a pair of Brazilian hens, which are a large variety, mostly black, with their necks slightly streaked with white. We think these will be quite an acquisition to the hen department of this section of the country, and hope friend Eaton will succeed in raising an abundance of these "high Germans" and Brazilians to supply those of his friends who may wish to obtain the breeds.—*Maine Farmer.*

A Fact for Farmers.—A writer in the Tennessee Agriculturist states, that chickens and fowls fed with corn ground coarse, as, for instance, hominy, will never have the gapes.

From the New England Farmer.

The Disease in Potatoes.

Mr. Breck,—Mr. James Brown having kindly brought me some of the potatoes infested with the disease which has this year committed such ravages on this vegetable, I proceeded at once to investigate the subject.

The peculiar smell, and the reputed poisonous qualities of this diseased potatoe, made me nearly certain that it was a species of fungus—a position which I think has been confirmed by my examination with the microscope.

The appearances which I examined were, 1st, A nearly black discolouration of the potatoe, just below the skin, penetrating about one-sixteenth to one-quarter of an inch into the substance, and apparently through the skin, in little black, indented tumifications, like pustules. It is probable that in these holes the vegetation of the fungus first begins, and spreads underneath.

2nd, On the surface of the skin, where these pustules were enlarged, there had been produced a greyish, slimy substance, of a very offensive smell.

The black mass, divided in a drop of distilled water, exhibited under the microscope a number of long and oval, very irregularly shaped dark bodies, interspered among the cells of the potatoe. Many of these cells appeared lacerated, but this might partly have been produced by the mechanical action of dividing, although I think not altogether. The greyish slimy mass was semi-transparent and indistinct, when mixed with distilled water, and exposed to the strongest light I could throw.

In order to discover a remedy for this disease, I decided on applying various substances to this fungus, with a view of effecting its decomposition, and examining their action under a microscope. The first application was salt, and the action of this was so instantaneous and decided, that I did not proceed to any other.

A portion of the dark substance was placed on a piece of glass, on the microscope-stand, in a drop of distilled water, and then thoroughly examined. A little salt, on the fine point of a penknife was then added; a nearly instantaneous change took place—the dark-coloured masses separated, much of them seemed to pass away, and instead appeared numerous dark slate-coloured bodies, which I easily recognized as the spores, or reproducing bodies of the fungus. With the grey, slimy substance, the effect was still more striking: all the indistinct slime disappeared—the mass became clear and transparent, and left nothing but these innumerable dark globules floating about in the drop of water. It seemed to me, that the salt destroyed all the vegetation of the fungus, leaving nothing but the reproducing spores, which are indestructible by salt. The spores of fungi are the bodies by which they are reproduced and spread, and are analogous to the seeds of other vegetables, and these spores are generated in such enormous quantities, that many fungi, like this on the potatoe, spread with inconceivable rapidity; but in order to vegetate, they require certain favourable conditions and circumstances, which yet require much investigation. These favourable circumstances are, in my opinion, prevented by salt, as it destroys the fungus vegetation. Therefore, wherever the disease existed this year, I recommended a liberal supply of salt to be spread on the soil, and trust it will eradicate the evil. It is, at all events, a remedy which cannot do much injury, if it does not succeed.

During the examination of the black substance, I of course recognized the grains of starch, which appeared sound; but wishing to know whether the fungus had affected them, I added a little iodine. The grains immediately took the usual purple colour, and I think were not at all injured; indeed, it appears to me that the injury takes place by the rupturing of the cellular parts of the potatoe.

I am aware that it requires some practice to judge well of the appearances under the microscope; but I repeated these examinations six or seven times, and always with the same results; still, I should be very glad to have them repeated by others, whether their correctness be confirmed or not.

My microscope being made by myself, is of course very inferior to those now manufactured in London and Paris; and it would be very desirable that some of our scientific societies would import one of these, the cost of which is too high for persons of moderate incomes. It might be made accessible, under certain conditions, to those desirous of undertaking such investigations as these; for there are many cases where the action of various substances on the causes of animal and vegetable disease are examined to very great advantage under the microscope, and effects seen which cannot be observed in any other way.

Should any gentleman, possessed of one of these superior instruments, be desirous of examining this disease, I would request of him to look at the action of sulphate of iron, sulphate of soda, or of ammonia, or of any other substance which can be cheaply applied to the soil as a preventive, and to give notice of his observations either in your or

some other periodical, for I see with delight anything that can bring nearer to each other science and agriculture.

Yours, J. E. Teschemacher.

Boston, Oct., 1844.

Culture of Asparagus.

Asparagus, or Spearage, is a native of Great Britain, where it is found growing in its primitive state, of a small slender habit, not much larger than the spikes of meadow-grass; it derives its name, *Spearage*, from the spear-like appearance of the shoots when they first protrude from the ground: no vegetable that I am acquainted with, is more capable, by an excess of food and high cultivation, of being brought to so luxuriant a state: the great pains that have been by many cultivators bestowed on the culture of this esculent, renders it capable of the term Giant being applied to the most luxuriant variety. The term *Giant* applied to the vegetable kingdom, being synonymous to a redundancy in the animal, I think is incorrectly applied. I shall, therefore, propose a more applicable term to those vegetables that admit of such redundancy, viz: *Monstrous Asparagus*, *Monstrous Rhubarb*, and the like, "deviating from the common course of nature."

The use and manner of preparing this vegetable for the table, is too well known to require any comment from me; I shall, therefore, proceed to its culture. The old fantastic way of digging out the soil two or three feet deep, and paving with oyster shells, bricks, stones, and the like, I shall leave with the cultivators of old, and endeavour to point out a system that will bear the test of the present improved state of horticulture. However, in one thing I shall differ from the present mode of culture adopted by the general mass of cultivators,—and I believe not generally agreed to by many scientific gardeners at the present day—which is the planting the bed in the latter end of May or the beginning of June, when the plants are in a full state of growth. I have had many convincing proofs that the planting of Asparagus roots in the fall and early in the spring, is not the best method. The roots of Asparagus being fasticulate, which is spreading from a common centre or crown in the shape of a hand, or something in the form of a crab; the roots protruding from the centre are long and fleshy, subject to rot in too much moisture when transplanted, and to dry up if kept in too dry a situation, and to mould in the winter in either; hence the roots should never be disturbed in the fall. When new beds are planted in the fall, many plants are liable to fail, and those that do not, have many of their roots much injured, and are thus much weakened before vegetation takes place.

The great advantage of the system of planting in June is, that it gives an opportunity to prepare the ground well in the spring, when the sun and air can penetrate and operate on it to very good effect; there is also a certainty of planting, for if well done, there need not be any failure, the plants being in a good state to grow and cling to the soil.

Culture.—Asparagus is increased by seed, and may be sown in the autumn as soon as ripe, or early in the spring, in a rich piece of ground, in drills eighteen inches apart, and well cultivated during the summer. The plants should be thinned to an inch apart, in order to give them strength; for when allowed to grow too thickly together, the crowns will be weak, and injure one another.

The succeeding spring the plants may be transplanted into a well prepared nursery bed, fifteen inches apart between the rows, and three or four inches apart in the rows. The mode of planting is, to draw drills with a hoe three inches deep, and dividing the fibrous roots, they are to be laid into the rows crown upwards. The planting being done, all that is required during the season is good culture.

Transplanting into the Final Bed.—The bed for final planting being prepared as before directed, at the proper time it may be planted in the following manner: Lay it out into four feet beds, with two feet alleys—drive down cedar stumps three feet long, at the four corners of the bed, leaving one foot of the stumps above the surface; this done, draw drills eighteen inches apart in each bed, six or eight inches deep, and plant the plants as before directed, eight or ten inches apart in the rows, covering them slightly with soil or compost from the compost heap.

The bed will require to be hoed and well cultivated during the summer, and in the fall it should be covered with a quantity of good rotten manure; early in the spring, rake off part of the long manure, and as soon as the surface is dry, it may be broken up with a three pronged fork, to loosen the surface. During the summer, all kinds of weeds must be taken from the beds as they make their appearance, and everything should be done to facilitate the growth and vigor of the plants. In the fall, as soon as the stalks are ripe, they may be cut off close to the ground, and the bed may be replenished with manure, and the surface earth of the alleys may be skimmed off a few inches

deep and thrown over the bed. In the spring the surface of the bed may again be forked; and the same process followed every year.

Remarks.—The principal items in growing good Asparagus are, that a good, deep, rich piece of ground be chosen for the bed, in a location where it will be always tolerably moist; low, marshy ground, is a good situation. In order to succeed, and have good grass, it is necessary that the bed be replenished every fall with good rotten manure, and be kept perfectly clean from weeds, especially the perennials, as the couch-grass, &c. Care must be taken also that the bed is not exhausted by cutting the spears too late in the season; it should always be a rule *never* to cut Asparagus after green peas are in use, which are the following vegetable to it. No Asparagus should be used until the second or third year of planting.—*Western Farmer and Gardener.*

The Artichoke.

Several trials which we have known made with this root, indicate that it is one of the most valuable for stock, which can be cultivated. A few years ago, a gentleman of our acquaintance planted a small patch of rich ground with them. The produce was at the rate of 1,200 bushels per acre. They were principally harvested by hogs, which were turned in and allowed to root them up as their appetite prompted. They gained well, with no other food, while the artichokes lasted. A great advantage of this root is, that it will lie in the ground without injury all winter.

Mr. Thomas Noble, of Massillon, gave us a brief account of a trial with artichokes, made by him in the past season. In April, 1843, he planted two acres with this vegetable. The ground was of medium quality. The artichokes were planted in rows two and a half to three feet apart—using a little more seed than is commonly used in planting potatoes. As soon as the frost was out of the ground last spring, (1844,) the digging of them was begun and continued as the stock required. The produce of the two acres was 1,500 bushels. They were fed principally to sheep, though some were given to cattle, horses and hogs. All animals ate them well, seeming to prefer them to turnips. While the sheep were being fed with them, they were pastured on growing wheat and clover. The shepherd thought the wheat and clover were sufficient for them, as there was a full "bite," and he accordingly discontinued the artichokes. The ewes fell off in their milk, and the lambs soon showed that they were not doing so well. The artichokes were again given, and they soon did as well as ever.

Mr. Noble also used the *tops* for fodder. He cut them in October, just before frost came, dried and housed them. They were fed to the stock in winter, and were evidently preferred to corn fodder.

Mr. N. is so well pleased with artichokes, that he is raising them this year on a larger scale. They require but little cultivation; it being only necessary to keep the ground clear of weeds till the artichokes get a good start.

Mr. T. M. Johnson, of Greensborough, Alabama, lately informed us, that he is this year growing 30 acres of artichokes. He considers them the most profitable vegetable he can raise. In that climate they can be dug any time in the winter.

There are several varieties of artichokes, but that called the Jerusalem artichoke—*Helianthus tuberosus*—is considered best. From the fibres of the tops or stems, a cordage is sometimes manufactured in some parts of Europe.—*Cultivator.*

How to preserve Meat fresh in any Climate.

Meat will never spoil if it be excluded from the air, and it may be had in London, put up in air-tight cannisters, a plan by which it has been kept fresh in all climates for nearly thirty years, which is about as long as the plan has been practised. For household purposes the most convenient way will be to provide a number of earthenware jars, with ground covers and a small hole in each cover, like that in a tea-pot, which may be stopped easily. The meat may be first partly boiled and deprived of its bones, and be then put, with part of the liquor, into the jars, which must be set in a pan of warm water and gradually brought to a boil. When the steam is rising from the jars the covers must be put on them and fixed down air-tight, the steam generated in the meantime being suffered to escape from the orifices in the lids. Finally, the pan must be removed from the fire, the holes in the lids stopped with small corks, and these corks waxed over to make them more impenetrable. It may also be a good precaution to run a little melted wax round the edge of each cover, to obviate the leakage due to any imperfection of the surfaces in contact. Meat might also, we conceive, be preserved by boiling it in melted fat for a few minutes, or until it was effectually heated through, and then dipping it in the fat, repeated after the same fashion as dipping candles, until it had acquired a protecting coat of tallow which the

air could not penetrate. Vegetables may be preserved in the same jars, and by the same method as we have described for the preservation of meat.—*Nat. Gazette.*

From the Western Farmer and Gardener.

Cultivation of the Quince.

Messrs. Editors,—The Quince is but little cultivated, as a useful fruit, in this country; and it is indeed, from some unknown cause to me, greatly neglected wherever it thrives, although the fruit is always in demand, and generally commands a good price. There is no fruit tree I am acquainted with, that requires more, and pays better for, pruning than the Quince; and there is none, I believe, that receives less, or is more neglected. The Pear, the Apple, the Peach, Cherry, and the many etceteras, are all cherished, dug around, pruned and trained by the amateur, but the Quince is often left "solitary and alone," by the side of a ditch, with its roots overgrown with grass or rank growing weeds and briars, unpruned and neglected, only when in fruit, and then the good lady of the house has a jealous eye for its golden load, and would sooner be deprived of her best set of China than the crop of Quinces to grace her table, as one of the best preserves; and then every one exclaims, What a fine preserve the Quince is—how very delicious! Now, sir, as I am always an advocate for the ladies, and have one present whilst writing, which gives credence to this assertion, I hope this much neglected tree will arrest the attention of the cultivators of fruit, and be pruned and cultivated in connection with other trees of the orchard.

The Quince thrives best in a rich loamy soil, and if planted by the side of a ditch, by the side of pig-pound, cow-house shed, or such location, it grows and bears well. The tree is increased and propagated by taking the suckers from the mother plant, by layering, and by putting out cuttings in the spring, precisely the same as the Gooseberry and Currant. Pruning, as I have said before, is essentially necessary, and should be done at the fall of the leaf; the method I adopt, is simply to cut out all the small old branches at the points, and leave all young shoots of the last year's wood, which will be the bearing branches next year; the small old twigs are always unfruitful, and take a portion of the sap from the fruitful ones, and hence the utility of pruning. The principal object to be kept in view by the pruner, is to cut out a portion of old-bearing wood every year, in order to bring in young shoots for fruiting the succeeding summer, and to keep the tree in regular and uniform shape.

In addition to the usefulness of the Quince as a fine fruit, the tree answers as an excellent parent stock to graft or inoculate the Pear upon; and perhaps on giving it a fair trial, will evade some of the diseases the Pear stock is subject to, as the fire-blight, &c. The roots of the Quince do not penetrate so deep as the Pear tree into the subsoil, which perhaps will be traced as an evil to the growth of the Pear in wet weather, as the soil must certainly become cold and saturated at a certain depth, and consequently the root of the tree must be in a colder temperature than the branches.

Yours, E. Sayers.

Report of the Sixteenth Exhibition

Of the Pennsylvania Horticultural Society, by the Recording Sec'ry, T. P. James.

The sixteenth Exhibition of the Society occurred on the 18th, 19th and 20th of September, 1844, and was held in the Philadelphia Museum. The Committee of Arrangement, consulting the comfort and convenience of visiters, as also of providing more ample accommodations for displaying the various increased products of a prolific season, very judiciously engaged for the occasion, in addition to the Chinese Saloon, the Grand Saloon of the Philadelphia Museum.

In the Chinese Saloon were shown the fine green-house plants and larger artificial designs; and in the Grand or Upper Saloon, the fruits, vegetables, &c.

The arrangements of the display in the former Saloon, were similar to those of previous exhibitions, having tables lining the North and South walls, ranges embracing the columns, and oval and circular forms running through the centre, which contained the choicest plants the city and vicinity could afford; many of which have grown to the size of trees, and become objects of interest for their fine condition. The designs shown on this occasion, although fewer in number, were of more admired construction and embellishment than usual. The beautiful model of the Scott Monument was decidedly a happy device; it was an imposing structure, towering to the full altitude of the Saloon, and embellished with much taste and skill. The English Rural Cottage was a neat piece of architecture and of beautiful finish. The smaller model of a jet d'eau, handsomely ornamented with indigenous flowers, was an exceedingly pretty and much admired design. The large evergreen Basket merited praise for the profusion of select Roses which

covered its lid. An Urn with the plants and flowers gracefully arranged, was a beautiful object. Stands of Dahlias and Roses, Baskets and Bouquets, were to be seen in various parts of this Saloon.

Facing the entrance to the vestibule, was suspended a design, very appropriately presenting in flowers, etc., the words: "Pennsylvania Horticultural Society's Sixteenth Exhibition."

In the Upper or Grand Saloon, which was made of easy access from the rear of the lower, was displayed on a table with an elevated centre, which extended through the middle, nearly the entire length of the Saloon, the great profusion of the various fruits and vegetables, honey and small designs, and bouquets. Of fruits there were about an hundred varieties of apples, very fine and free from blemish, many of large size, weighing from one to one and three-quarter pounds: upwards of sixty varieties of foreign and native grapes; one collection alone contained thirty-three kinds: twenty varieties of peaches, one half of which were seedlings: as many varieties of pears; and a number of kinds of plums: there were also displayed quinces, nectarines, strawberries, figs, oranges, lemons, citrons, cranberries, almonds, filberts, chesnuts, English walnuts, etc.

Of culinary vegetables, there was a profusion of all kinds and in the finest condition.

Of honey, there was one contribution consisting of seventeen glass vases of the purest —a beautiful sight. One contributor exhibited a hive with the bees, which were hived on the 19th of May last; it contained one hundred and thirty-four pounds of honey, the largest yield as yet presented: he also had another yield of this season's collection, in four boxes, which contained ninety-three pounds; another contributor exhibited four boxes containing one hundred pounds, collected by one swarm this season.

At the eastern extremity of this Saloon was erected a grape arbour, seven feet in height and six feet in length, having suspended from all parts of it two thousand bunches of grapes; a tempting display, and around it were cut specimens of select roses and dahlias; over the exit door was suspended a festoon with various fruits interwoven; and upon the long table, interspersed with the fruits, were seen the many beautiful vases, cones, baskets and bouquets.

This exhibition has proved a most successful test of the existing state of horticulture in this community, discovering no lack in filling two of the most extensive saloons in the country with the finest specimens of the various products of the green-house, garden, orchard and field. These autumnal shows, together with the interesting monthly displays, and the great amount of awards given by the Society for the best cultivated objects, tend to advance the science of horticulture to an eminent and envied position.

The products exhibited from time to time before the Society, appear to be brought almost to a state of perfection, and while incentives should still be held out for their growth, it now becomes the Society to divert some of its energies into other channels. It has in some measure done so, but seemingly with little success. Nearly three years ago, there was originated the project of holding out inducements for the introduction and propagation of new plants, flowers, fruits and vegetables; and a committee with ample funds at its disposal for meritorious awards appointed; but from some inexplicable cause the results have not met expectations. It is still to be hoped, however, that propagators and amateurs will appreciate the advantages to themselves, and to the advancement of the science of horticulture, and by the means of introducing such new objects foster the taste for the rare, the curious, beautiful, scientific and useful.

And further, the Society offers inducements also for the originating of new fruits and vegetables, and doubtless will offer stronger. Of late there have been presented many very fine seedling peaches, strawberries and some gooseberries; but there are other species to which attention should be directed: grapes—cannot our native varieties be improved by hybridizing with the finer foreign to advantage? Also pears—cannot others, equal to the Sickel or the Pennsylvania be produced? And so of plums, apples; cherries and other fruits. And culinary vegetables—a new potatoe is much wanted: the old Mercer is in its decline; and many other products of the soil better known to the cultivator, might be improved, and will meet, in all probability, with due encouragement from the Society.

Aboriginal Fruits.—It is a fact in the history of vegetables, to which I remember no exceptions, that, where the wild stock flourishes naturally, there the improved varieties succeed best. Examples occur in the English apples and the French pears; for in no country does the crab abound more than in England, nor the wild pear than in France.—*G. W. Johnson.*

Some one has said that the first ingredient in conversation is truth, the next is good sense, the third good humor, and the last, wit.

THE ALPACA.

The Alpaca is a native of Peru, where it was found by the early Spanish adventurers. It is of inestimable value to the Indians, both on account of its wool and flesh, and remarkable adaptation to the peculiarities of the country. It will readily pick up a subsistence from the mosses, the lichens or the buds of shrubbery which are to be found on the mountain ridges of the Andes, or it will be better pleased to revel in the fertile vallies with which that wild country is interspersed. Considerable efforts have been made within a few years, and with various success, to introduce the Alpaca into England, and on some parts of the continent. Dr. Emerson says in the Farmer's Encyclopedia, that "the demand for Alpaca wool in England, is rapidly increasing, and is well worthy the attention of North American farmers to make the experiment of raising Peruvian sheep. At a late meeting of the British Association for the Advancement of the Arts and Sciences, Mr. Dawson made a communication on the subject of the introduction into England, of a species of *Auchenia*, or Llama of South America, and presented specimens of Alpaca wool, in its natural and manufactured states, resembling silk, and without being dyed, as black as jet. Naturalists distinguish five species of the Llama, all of which afford wool. But the Alpaca alone has fine wool, from six to twelve inches long, and the Vicuna wool, like the fur of the beaver, at the base of its coarser hair. It is capable of the finest manufacture, and is especially adapted to such fabrics as the finest shawls. The yarns spun in England are mostly sold in France for the shawl trade, at $1 50 to $3 50 per pound, according to quality, the price of the wool in a natural state, being about 50 cents per pound. This wool is naturally free from grease, in which respect it differs materially from that of common sheep, and the animal requires no washing before shearing. Mr. Dawson remarked, that it was not certain whether the Alpaca could be made to thrive in Great Britain. The last remark might raise a doubt whether it could be raised to advantage in the United States. Should it be proved that the Alpaca was not adapted to any part of Great Britain, it would furnish no solid argument against its adaptation to the climate of the United States, especially the Northern States, and the mountainous districts everywhere."

"Mr. Bennett, of Farindon, England, had a pair of Llamas sent to him from Peru 20 years ago, and fed them as sheep are usually fed, with hay and turnips in the winter. From his own experience he found that they are particularly hardy and very long-lived. He increased his stock, and has actually had six females at a time which have had young ones. Of these very few have died. The number of Peruvian sheep in the kingdom at present, July, 1841, is short of 100, chiefly distributed in parks. The existence of this number among us, supported by their healthy appearance, as reported from every quarter where inquiries have been instituted, is a better proof of the capacity of Andes sheep to adapt themselves to our climate, than any further arguments or elucidations which could be adduced."

For the Farmers' Cabinet.

A Warm Bed for Pigs.

To the Editor,—I very well remember a saying of an old gentleman, an excellent farmer, that if you would make a hog profitable, you should not let him ever see a winter: and I think I have satisfied myself, that spring pigs well kept and nursed, are far less expensive, and yield more in return for their keep than those which are fifteen or eighteen months old. But there is one thing quite certain; if we prefer our store hogs to come in the fall, we ought to be careful to keep them through our long cold winters, both warm and dry. Every observant farmer knows that if his cattle are not sheltered from the cold weather and storms, they will require much more food to keep them in tolerable order, than if they are kept warm and comfortable. Just so it is with pigs—if they are suffered to run over your premises in the snow and sleet, with their legs and snout as red as the gill of your gobler, without a warm and dry bed of clean straw to resort to when they choose, they will not only, in all probability come out with *mange* in the spring, but every grunt they give will convince you that all the food they have devoured, has been thrown away; for shoats that have a cold, damp, comfortless bed, will get mangy, and *mangy* pigs can not grow. Let any one who has a mind to try the experiment, take two pigs of the same litter, suffering the one to run as above, and let the other be well housed, and well fed, and it will be found that the superior growth of the latter will pay for the care bestowed upon him, with good interest. Hogs that are confined, and cannot get to the earth, will frequently be benefitted by having a little charcoal, soft brickbats, or soft wood thrown into them, and a trifling quantity of brimstone mixed in their food occasionally, is an excellent thing. The hog has the credit of being a dirty fellow—but we should remember that he likes to be dirty in his own way, and for his own pleasure: he neither prefers to live cold, nor in filth—still less does he choose to be half fed. Dr. Franklin's man said the hog was the only gentleman in England, because he alone was exonerated from labour. If this be so, surely he ought to be well fed and well housed in America. I entirely believe that the same amount of food that will barely carry a pig through the winter with bad management, will, with good, prudent treatment, keep him growing, and in the spring you have something to build upon, that will by and by make you a solid porker, who will do credit to your stye. Essex.

Newark, N. J.

To Destroy Lice on Cattle.

Grease, fat, lard, or any oily substance, if applied to neat cattle infested with pediculi, will have the desired effect; it must be applied by being well rubbed into the hair on those parts where the vermin are found, and repeated until they are destroyed. Insects have no lungs, but breathe by spiracles or minute holes in their bodies, and if these spiracles are clogged with grease or fat, they become suffocated and die. Goose grease, hogs' fat, pot-skimmings, will all answer the purpose, and may be obtained in any farmer's family without cost. Tobacco, also, will kill these vermin on cattle, by its operation on them as poison. A simple infusion of tobacco, applied warm and rubbed into the neck or dew-laps, or wherever found, so as to completely wet the hairs, and repeated at an interval of a few days, will destroy the nits and lice in a short time and at a cheap rate. The curry-comb should be used after the application.—*Ex. Paper.*

Mediterranean Wheat.—The very great advantages of this wheat, over any now used by our farmers, is becoming every year more apparent. Besides its superior yield, it is safer from the ravages of the fly and injury from rust, by its more vigorous and rapid growth.

We have received a statement from Mr. Mansfield B. Brown, of the yield of his last year's crop. The average yield from a field of 23 acres, was 35 bushels to the acre. The wheat weighed 64 lbs. to the bushel. From 158 lbs. which he took to the mill, he received 120 lbs. of superfine flour, after paying toll. If our recollection serves us right, the most of it was cut early, and before it was fully ripe.—*Pittsburg American.*

A Fact for the Curious.—A. W. Palmer, of Cheam, in Surrey, England, tried a very striking experiment respecting the production of wheat. In July, 1841, he put one grain of wheat into a common garden pot; in August he divided it into four plants, and in three weeks again divided these into twelve plants; in September, these twelve were divided into thirty-two, which in November were divided into fifty; and he then placed them in the open ground. In July, of 1842, twelve of them had failed, but the remainder of them were healthy. On the 19th of August they were cut down, and counted 1972 stems, with an average of 50 grains to the stem—giving thus the increase of 98,600 grains.—*South Western Farmer.*

Report of Experiments in the Manufacture of Corn-stalk Sugar.

[For which experiments a premium of one hundred dollars has been awarded by the New York State Agricultural Society.]

By M. Adams, of Ogden, Monroe co., N. Y.

It is now but three or four years since it was discovered that sugar could be made from the corn-stalk. Very little attention was given to the subject, until the appearance of a Report made to Congress by Mr. Ellsworth, Commissioner of Patents. The account given by him of experiments made the preceding year, which he had collected from the different parts of the United States; the great amount of practical information embraced in the Report, together with the very interesting and important character given to the subject, awakened public attention. The fact, too, that a new method of producing another almost indispensable article, discovered about the same time, and which had already been brought to considerable perfection, and proved so triumphantly successful, has perhaps had an influence in leading us to expect that soon sugar would be as easily produced from the corn-stalk, as oil now is from hogs'-lard. Indeed, so obvious is it to every considerate person, that the position once established that sugar can be produced in this way, it is no less than bringing an article almost indispensable as a part of our daily food, and a most healthful and harmless luxury, as much within reach of every family in the United States, as the very corn has been from which it is produced.

Viewing the subject in this light, perhaps, induced the Executive Committee of the New York State Agricultural Society, to offer the very liberal premium of one hundred dollars for the "best experiment" in testing the value of the crop, and the practicability of cultivating it. The thing was new—much expense must be incurred—a mill and other apparatus must be constructed—"the juice extracted by iron rollers, so as to obtain the maximum quantity of sugar" —one acre of northern corn, cultivated for the purpose, to be submitted to the test. With all the above requisitions I have endeavoured fully to comply; and now, the last, but not least, to make a "full report of the process and expense," remains to be done.

So great is the interest felt upon this subject, that it is presumed a very minute account of the process will be expected. In the performance of this duty I must claim the indulgence of the committee, for the writing of Reports is new business to me.

Raising the Corn.—One acre of ground was selected of a sandy loam, cultivated last year to ruta-baga; this was manured with thirty loads of the best stable manure, well mixed in with the soil by twice ploughing and harrowing. Corn planted the 13th of May, with eight-rowed northern corn; the rows three feet apart one way, and hills eighteen inches the other, with six to eight kernels in a hill. It came up finely, and was plastered the 31st of May; hoed the first time the 9th and 10th of June, the second time 24th of June. Cultivator run through it three times. The corn began to tassel the 18th of July, and was in full tassel the first of August.

Up to this time the crop had looked uncommonly well, but from the 1st of August a severe drought commenced, and continued until the crop was very materially injured. Some spots where the corn had grown most luxuriantly, withered and dried up; other parts of the field suffered less, so that on the whole there was some more than half of a good crop, or what there would have been if the season had continued favourable.

Cutting, Grinding, and Boiling.—Cut the first stalks, and made the first experiment at grinding and boiling, the 25th of August. The stalks at this time were quite green, but the produce was quite satisfactory, and appeared quite favourable for crystalizing. The juice was very abundant, of a greenish colour, very rich, thick and heavy, yet retaining all the flavour of the corn-stalk, until after cleansing and boiling.

August 30th, made the second batch. This was boiled in a shallow sheet-iron pan, clarified and strained according to the directions given in Mr. Ellsworth's Report. From this batch was taken the specimen of sugar exhibited to the committee at the State Fair in Rochester.

Other experiments were made the 4th and 7th of September.

The object of these successive experiments was mainly to determine at what time the saccharine matter was sufficiently matured to make crystallized sugar.

On the 11th of September the stalks appeared in the right stage, and the cutting, grinding and boiling were commenced, and continued with little intermission until the whole was completed. The method pursued in this operation, was to keep a sufficient number of hands in the field to strip the leaves or blades, and cut off the tops as fast as the stalks were wanted for use; this labour was generally performed by boys. The corn-field being at a little distance from the mill, the horse used for grinding was put before a light wagon, driven to the field, the

stalks were then cut and placed upon the wagon,—taking care to keep them straight and in order—driven to the mill and ground without delay. A load of this kind in a light wagon, with lumber box, will make a batch of fifteen to twenty gallons; this would be ground in about thirty minutes. Lime water was mixed with the juice while it was running from the mill. The juice is then strained through a flannel cloth into the pan, and heated, rather moderately, to the boiling point, when the scum is removed with a skimmer; then boiled rapidly for a few minutes. The syrup is then removed from the fire, and again passed through the flannel strainer, when the boiling is finished as rapidly as possible.

This process, from the cutting of the stalk to taking the sugar from the fire, could not possibly be performed in less than two hours; and if the batch was larger, would often exceed three. Five batches were made in one day, from which one hundred pounds of sugar were produced.

The Boiler.—The boiler or pan, I made of a sheet of Russian iron, turned up at the sides and ends, lapped and rivetted at the corners; would hold about twenty-five gallons, five and a half inches deep, but from fifteen to twenty gallons is as much as would boil to advantage. The pan is placed upon an arch of brick, so that the fire comes in contact with only the bottom.

Mill.—To construct this was a matter of much more difficulty. Some drawings and descriptions are given by Mr. Ellsworth, but little more could be known from them than that there must be three rollers, so placed and put in motion that the stalks in passing between them should receive two crushings.

To plan and construct a mill, with the proper dimensions and with the strength required, so that the work of crushing the stalks should be performed with certainty and despatch, was no easy task. I flatter myself that I have in this been tolerably successful. The rollers and iron-work, patterns, &c., for my mill, were made by A. J. Langworthy, of Rochester, at a cost of sixty-five dollars. The whole weight of iron is about nine hundred pounds.

About one half of the expense of the mill is in the horse-power. The iron rollers being placed horizontal, it was necessary to have a horse-power wheel and gearing in order to give them motion. If the more simple, and it would seem at first view, less expensive forms, given in Mr. Ellsworth's Report, had been adopted, placing the rollers perpendicular, the horse passing around them, the rollers must have been of large diameter in order to take through the length of corn-stalk at one revolution of the horse. These large rollers, when made of iron, would have been very expensive, and probably not work as fast as the small ones I use, giving them a quicker motion by gearing. In my mill the circumference of the rollers has such a proportion to their motion, that their velocity is equal to about one-sixth the velocity of the horse; or in other words, a corn-stalk six feet long, will pass through between the rollers in the same time that the horse will walk thirty-six feet The grinding is a beautiful operation, the amount of juice contained in the stalk is surprising to every one. The stalks in passing through the mill are crushed very fine, and the juice entirely separated from them by the pressure of the rollers.

Clarifying.—This has been to me a difficult, and to some extent an unsuccessful operation. All the various methods recommended by different persons who have made some experiments on corn-stalk sugar, and all that my own experience in clarifying maple sugar could suggest, failed of producing fully the desired effect. In all the failures which have been experienced to produce crystallized sugar, the cause should be sought here. Unless the juice of corn-stalks can be clarified, it is vain to expect a pure article of crystallized sugar. All the obstacles to the complete success of this enterprise are met at this point; but that they will be completely overcome, there cannot be the least doubt. Lime water applied to the juice as soon as it comes from the mill, one gill to fifteen gallons, was thought to produce the best effect. But experiments were made with various other things, such as milk, eggs, charcoal, &c.; these were used separately and combined, but nothing appeared to raise the scum as well and render the juice as clear and well-flavoured as the lime water. One experiment was made by filtering the juice through sand and charcoal. This rendered it very transparent and improved the taste, but there are very many objections to this process—the length of time required for the operation is a sufficient one.

Straining.—This operation is performed both before and after clarifying. The strainer used was a square yard of good new flannel, of fine texture; so great is the amount of mucilage, or very minute particles of the cornstalk contained in the juice, that the strainer has to be rinsed in water once or twice in straining a batch. The second time straining is rendered more difficult by the juice being hot, as the hands have to be used in forcing it through the cloth. As knowledge and experience are gained on the subject of clarifying, the straining will

be dispensed with, except to pass the juice through a coarse strainer to remove some of the larger impurities. Some method will be discovered by which all this foreign matter will be removed in the operation of skimming.

Boiling.—This operation requires care and close attention, particularly when about ready to skim, and when the juice is concentrated to about the point desired. The more rapidly this operation is performed, the more perfect will be the crystallization. But, however necessary it may be, it is scarcely possible, with any apparatus that I have any knowledge of, to perform the whole labour of cutting, grinding, straining, skimming, and boiling, in the short space of one hour, as recommended by Professor Mapes, of New York. If this is ever done, it must be in very small quantities, or some very improved method must be adopted.

In boiling, as soon as the scum begins to rise, the fire must be regulated with care, that time may be had for removing the scum before it shall be boiled in. If the operation of boiling and skimming be well performed, about one gallon of thick heavy scum will be obtained from a batch of fifteen gallons. The syrup, when it becomes thick and nearly done, has a very beautiful appearance, in every respect equalling the best of maple syrup. To boil to the crystallizing point,—which is a very uncertain one,—requires considerable care and discrimination. The same tests that are used for maple syrup are equally applicable to corn-stalk; as for instance, when it will flake off, breaking short, from a dipper or stick—or string out between the thumb and finger, from half an inch to an inch in length, is perhaps the safest test. Very great care is necessary here, that it be brought to the right point and no more; and also in managing the fire, as a little blaze, or too strong a heat, is most sure to scorch, and this is fatal to crystallization.

Crystallization.—Difficulty has been found here by all that have made experiments with corn-stalk sugar; but perhaps every one has obtained a sufficient quantity that was well grained, to satisfy him that the difficulty was somewhere in the process of manufacture.

From recent observation I am inclined to think that I have kept my sugar in too cool a place. Two small parcels, left partly by accident where they received the warmth of a fire, were found well grained. But there is another difficulty after it is well crystallized, to make the molasses separate, or drain, as it is called: although the crystal appears to be as fine as was ever formed, still the molasses will not separate by any common methods used for maple sugar. As yet, I have not been able to procure any better specimen than that exhibited at the State Fair.

Amount from the acre.—Although the quantity of stalks was so much diminished by the drought, yet six hundred pounds were obtained; this, it should be understood, is weighed when taken from the fire and before graining has commenced. If it were all well grained and the molasses separated, the weight of sugar would probably not be more than five hundred, and molasses one hundred.

In order more fully to determine the amount that might be produced from an acre of good corn, I measured two square rods of the best corn I had; the stalks were then cut, and their weight was 195 pounds; after grinding, the juice weighed 69 pounds and measured nine gallons; from this I obtained twelve and a half pounds of sugar. By this it would appear, that had the whole acre been as good as the two rods submitted to the test, one thousand pounds would have been the produce. And it would seem that this must be a safe calculation, as the stalks on the two rods were not as large as would be grown in a good season.

An equal amount by weight of large stalks of rank growth, and small ones that were grown thick, were ground separately; but as no material difference was found in the produce, my opinion is that the corn should be cultivated so thick that no ears will be produced.

EXPENSE.

For the rent of land,	$3 00
" thirty loads of manure 1s. per load,	3 75
" drawing thirty loads manure 10c. per load,	3 00
" ploughing, harrowing and fitting ground,	2 34
" planting, plastering, cultivating and hoeing,	5 87
" seed-corn and plaster,	0 68
" spreading manure,	0 88
The whole expense of raising 1 acre corn-stalk,	$19 52

There is no part of the business that is so tedious as plucking the ears, stripping the leaves and cutting off the tassel. A part of this labour was performed for the fodder that might be obtained from it, but it was not sufficient to pay; as the labour of plucking the ears was performed for this consideration, I am unable to say what it would cost; but this much is certain, it is needless for the most part, as no ears of any amount need be raised, if the corn is sufficiently thick. From the best estimate that I can make of the expense of stripping leaves and cutting the tassel, I think that a smart hand would perform the work on an acre in six days; therefore,

The amount brought forward, ...	$19 52
To six days stripping leaves, &c.	4 50
This is the whole expense up to the cutting of the stalks,	$24 02

It is somewhat difficult to come at the expense I was at in manufacturing the acre of stalks into sugar, so much was done by way of experiment. But as one hundred pounds were made one day, I shall take that as my guide, and call it a day's work for two hands to make one hundred weight.

The amount above brought down,	$24 02
To 12 days' work making sugar at 6*s.* per diem,	9 00
To use of horse and wagon, 6 days at 3*s.* per diem,	2 25
To ½ cord of wood at 12*s.* per cord,	1 12
The whole expense of manufacturing 600 lbs., is	$36 40

Or a fraction more than six cents per pound.

Some credit might be given for fodder, as a large amount of leaves or blades might be saved with a little extra labour while stripping them. The stalks, after being ground, are worth something; horses and cattle eat them very greedily when they are fresh from the mill.

Remarks and Suggestions, by way of Recapitulation.

1. If good crystallized sugar of pleasant flavour shall be produced from the cornstalk, I can see no good reason why its manufacture shall not become as universal as the raising of corn. Every neighbourhood can as easily be supplied with its apparatus to make sugar as to make cider.

2. Corn should be grown so thick as to produce no ears. Some variety of corn that grows very large, like the "Ohio" or "Rocky Mountain," might be best; this latter is well adapted in some respects, as it is very little inclined to ears or leaves; cutting the tassel will not prevent earing, unless they are all cut and kept cut. The cutting of the stalk may commence as soon as the tassel is ripe. If the weather is warm, grind immediately; but if cool, or early in the morning, a little delay is not thought to be injurious.

3. Lime water is perhaps the best for clarifying of anything yet discovered; but some agent that will more effectually cleanse from all deleterious or foreign matter, is necessary. Science, with persevering experiment, will no doubt produce this result.

4. The less time occupied in boiling, the more perfect is crystallization. This is true of the maple juice, and probably more so of the corn-stalk. To boil to advantage, two pans should be provided.

5. Any man of ordinary ingenuity, can make a pan in two hours, with no tools but cold chissel, punch, hammer and six cents worth of rivets.

6. I make no doubt that a mill with wooden rollers would answer a good purpose for a small operation, and small operations are what is wanted; let no man go into this business *largely* until there is more knowledge on the subject.

A simple mill with two rollers, that might be built for five dollars, would crush the stalk and save most of the juice. No cog-wheels can be necessary; for if you turn one, the other must go. When experience has taught how to clarify, so that we may be sure of a good article, then will be time for more perfect and expensive machinery.

7. If the result of this enterprise depended on the amount of saccharine matter contained in the corn-stalk, its success would be certain. Estimates that have been made of the amount that might be made from an acre, have probably never been too high. Improvements in cultivation, and in finding the variety of corn best adapted, will no doubt greatly exceed these estimates.

8. The expense, as compared with maple, must be much in favour of corn-stalk. Of the expense of growing an acre of corn-stalks, every farmer may judge correctly; then compare the amount of fuel, the amount produced in a day, the expense of fixtures, and it is all vastly in favour of the corn-stalk. Only let the cornstalk sugar have the delicious flavor and the beautiful crystallization of the improved maple, and no longer will that pride of the forest be hacked and bored by "wicked hands," to obtain its sap.

May we not hope that Mr. Ellsworth's forthcoming report will throw much light on the subject? The collected experience of all that have been engaged in the business the past season, will soon be laid before Congress and the people. If Professor Mapes shall fulfil his pledge made in the last report, some scientific and practical information will no doubt be the result.

With these remarks I submit this report. I have endeavoured to give a faithful and full account of my experiment. I am aware that on some parts of this business I cannot speak as favourably as might be desired; but for myself, I have no fear of the result of the enterprise. I would beg leave to suggest, that a liberal premium be offered next year, for a given amount of corn-stalk sugar of the best quality. This might stimulate, not only a greater amount, but more careful experiment.—*N. Y. State Agricultural Society's Transactions.*

CONDEMN bad traits by practising good ones.

For the Farmers' Cabinet.

An account of the Grubb, or Grass-worm which appeared in parts of Salem co., N. J., in 1806 and 1844.

To the Editor,—In this vicinity it first appeared, so far as I can learn, on the 11th of Sixth month, 1806; it attacked all kinds of spear grass, such as Timothy, Herd, Blue and Orchard grass, but its ravages were mostly confined to the former, eating the leaves and heads, as appears from a memorandum made at the time by one of our most intelligent farmers of that day. He first thought this worm had been brought by the red chaff bearded wheat, as it was in 1806 that this variety was first introduced in this neighbourhood, but on further examination it was found to be in the higher parts of the tide-meadows, where Timothy grew; so that supposition was put to rest. On one farm, within a mile of Salem, by which I frequently passed, their ravages were most apparent. They took one fine field of Timothy: the owner thinking he would arrest their further depredations, dug a ditch, say one foot wide and one deep, which caught myriads of them, but before he had resorted to this expedient, they had made their way into an adjoining field of wheat, where they appeared to make great destruction by eating the leaves and beard. He thought his crop would be ruined, and he set two men at work with a line, say two rods long, and passed it over the heads of the wheat, the men walking in the furrows and holding the line tight; as the wheat would spring up from the line, the worm would fall to the ground. In that way he kept them off to a considerable degree, but those who did not resort to this plan, found after it was all over and the harvest arrived, that the crop was not materially lessened. It was not so with the grass; it being more in the sap, the worm had a greater effect on it; in some instances nearly destroying the crop, and what was left was of little value. They seemed to come all at once in the neighbourhood, and appeared mostly at full size, which was about as large as an ordinary grubb-worm—some were nearly black, others somewhat lighter in appearance, with lighter stripes on their sides and belly, much like the worm that is often seen inside of the husk of the upper end of an ear of corn. From the above date there had never been the same kind of worm in such quantities as to make them noticed, and by their long absence we had almost forgotten that we had ever had such visitors. On the same day of the same month, this present year, we were visited by the same kind of worm. The writer was walking, towards evening, with two of his friends, to look at his fat cattle, and in approaching within six or eight rods of the pasture field, we noticed a great quantity of worms in the main road, migrating into the adjoining fields. The grazing field was principally in Timothy, with some red clover. The worms were making great ravages on the former, and were passing into the adjoining fields, both of which were in wheat. The main road passed between one field of wheat and the grazing field, and it was curious to observe the smallest species of ants attack the worms when they would attempt to cross that part of the road that was destitute of grass. The ants would sting them and then jump back, the worm appearing to be thrown into great agony; four or five stings would answer their purpose; they would then lay hold and take him off. On the other side of the pasture field there was nothing but a fence between it and the wheat; this was of the Mediterranean species, but it was so forward and the blades so nearly ripe, except the uppermost ones, that they did not like it. The uppermost ones and the beard they attacked in a manner similar to the attack in 1806. This piece of wheat was sowed after corn, and in every four or five rods there was a strip of oats about eight feet wide; this they attacked voraciously, as it was in full vigor and about coming out in head. It was thought for some time they would not go beyond this strip of oats, but finding they were passing through it, I ploughed a deep furrow and cut the land side down with a spade to make it smooth, and a little slanting under, to prevent them from getting further, which seemed to answer the purpose. This made them thicker in the piece of oats than they otherwise would have been, if nothing had interrupted their progress. The consequence was, that they stript them completely, and the earth was almost covered with their excrements; still they did not entirely destroy the oats, for they shot up afterwards and produced, say half a crop. They would make their appearance in the afternoon, when the sun was about an hour high, and so continue their ravages until the next morning, say the sun an hour high; they would then disappear by going down under the dead grass or rubbish next to the earth, and there lie through the day. In the wheat field, where there was not any litter to hide under, they would work their way under the earth. The timothy in the pasture field, they eat up, leaving only the bare stalk. About two-thirds of the field had been top-dressed the fall before, viz: one acre with lime, say 100 bushels to the acre; one ditto,

with wood ashes, say 150 bushels per acre; the rest with stable manure. As far as the top-dressing of manure, lime, or ashes, was put, the worms were much thicker than where there was not any thing put. This was also noticed to be the case in some neighbouring fields. About the height of them, they were so thick I thought I could put my foot on at least one dozen at a time. As their appearance and habits were the same as those in 1806, so their time seemed to be as limited as their predecessors; about eleven days being the length of their course. There were very few to be seen after that period. They attacked more or less the grass fields in the neighbourhood where there was any timothy, but none so bad as the field and farm here described.

This, I think, is as far as I can recollect, a history of our long absent visitors; and from my knowledge of them, I hope they may be at least as long making their descent or ascent, or whatever other course they may take in getting round to us again, as their predecessors have been, and a little longer, for truly they are not welcome visitors. CASPAR WISTAR.

Salem, N. J., Twelfth mo. 20th, 1844.

We feel much obliged to our worthy friend, C. W., for his account of the singular visitations of the worm described above; and shall be gratified if any of the readers of the Cabinet have it in their power, and will please to throw further light on the subject through our columns. On looking into the Essay on *Insects injurious to Field Crops*, by the late Willis Gaylord, published in the Transactions of the N. York State Agricultural Society, for 1843, and which we mean to transfer to the Cabinet as soon as we can find room for it, no mention is made of any worm which seems identical with the above. These things are exceedingly curious, and every way worthy the attention and observation of those who have it in their power to bestow them.—ED.

From the Western Cultivator.

Blight in Pear Trees.

Extracted from a paper read before the Indiana Horticultural Society.

THE Indiana Horticultural Society, early in the summer of 1844, appointed a committee to collect and investigate facts on the fire-blight. While serving on this committee, and inquiring in all the pear growing regions, I learned that Reuben Reagan, of Putnam county, Ind., was in possession of much information, and supposed himself to have discovered the cause of this evil; and to him I am indebted for a first suggestion of the cause. Mr. Reagan has for more than twelve years past, suspected that this disease originated in the fall previous to the summer on which it declares itself. During the last winter Mr. Reagan predicted the blight, as will be remembered by some of his acquaintance in Wayne county; and in his pear orchards he marked the trees that would suffer and pointed to the spot which would be the seat of the disease; and his prognostications were strictly verified. After gathering from him all the information which a limited time would allow, I obtained from Aaron Alldredge, of this place, a nurseryman of great skill, and possessed of careful, cautious habits of observation, much corroborative information; and particularly a tabular account of the blight for nine years past in his nursery and orchard.

The spring of 1843 opened early, but was cold and wet, until the last of May. The summer was both dry and cool, and trees made very little growth of new wood. Toward autumn, however, the drought ceased, copious rains saturated the ground, and warm weather started all trees into vigorous, though late, growth. At this time, while we hoped for a long fall and late winter, on the contrary we were surprised by an early and sudden winter, and with unusual severity at the very beginning. In this region much corn was ruined and more damaged; and hundreds of bushels of apples were caught on the trees and spoiled; one cultivator alone losing five hundred bushels. Caught in this early winter, what was the condition of fruit trees? They were making rapid growth, every part in a state of excitement, the wood unripe, the passages of ascent and descent impleted with sap. In this condition, the fluids were suddenly frozen; the growth instantly checked; and the whole tree, from a state of great excitability, was, by one shock, rudely forced into a state of rest. Warm suns, for a time, followed severe nights. What would be the effect of this freezing and sudden thawing upon the fluids and their vessels? I have been able to find so little written upon vegetable morbid anatomy—probably from the want of access to books—that I can give but an imperfect account of the derangement produced upon the circulating fluids by congelation. We cannot state the specific changes produced by cold upon the ascending sap, or on the cambium, nor upon the elaborated descending current. There is reason to suppose that the two latter only suffer, and probably only the last. That freezing and thawing decompose the colouring matter of plants is known; but what other decomposition, if any, is effected, I know not. The effect of congelation upon the descending sap of pear and apple trees,

is to turn it to a viscid, unctuous state. It assumes a reddish, brown colour; becomes black by exposure to the air; is poisonous to vegetables, even when applied upon the leaf. Whether in some measure this follows all degrees of congelation, or only under certain conditions, I have no means of knowing.

The effect of freezing and thawing upon the tissues and sap vessels is better known. Congelation is accompanied with expansion; the tender vessels are either burst or lacerated; the excitability of the parts is impaired or destroyed; the air is expelled from the æriferous cavities, and forced into the passages for fluids; and lastly, the tubes for the conveyance of fluids are obstructed by a thickening of their sides.* The fruit trees in the fall of 1843, were then brought into a morbid state—the sap thickened and diseased; the passages lacerated, obstructed, and probably, in many instances, burst. The sap, elaborated, and now passing down in an injured state, would descend slowly, by reason of its inspissation, the torpidity of the parts, and the injured condition of the vessels. The grosser parts, naturally the most sluggish, would tend to lodge and gradually collect at the junction of fruit spurs, the forks of branches, or wherever the condition of the sap-vessels favoured a lodgement. In some cases the passages are wholly obstructed; in others, only in part.

At length the spring approaches. In early pruning, the cultivator will find in those trees which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow colour. These will be the first signs, and the practised eye may detect them long before a leaf is put forth.

When the season is advanced sufficiently to excite the tree to action, the sap will, as usual, ascend by the alburnum, which has, probably, been but little injured; the leaf puts out, and no outward sign of disease appears; nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months the blight is fully developed. When the descending fluid reaches the point where, in the previous fall, a total obstruction had taken place, it is as effectually stopped as if the branch were girdled. For the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good and the vitality of the wood unimpaired; but where the sap and vessels are both diseased, the sun affects the branch on the tree just as it would if severed and lying on the ground. There will, therefore, be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points the current downward is wholly stopped. Only the *outward* part, however, is dead, while the *alburnum*, or sap-wood, is but partially injured. Through the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch, seemingly dead in the middle, growing thriftily at its extremity. No insect-theory can account for this case; yet it is perfectly plain and simple, when we consider that there are two currents of sap, one of which may be destroyed —and the other, for a *limited time*, go on. The blight, under this aspect, is nothing but *ringing* or *decortication* effected by diseased sap, destroying the parts in which it lodges, and then itself drying up. The branch will grow, fruit will set, and frequently become larger and finer flavoured than usual.

But in a seond class of cases, the downward current comes to a point where the diseased sap had effected only a partial lodgement. The vitality of the neighbouring parts was preserved, and the diseased fluids have been undried by wind or sun, and remain more or less inspissated. The descending current meets and takes up more or less of this diseased matter, according to the particular condition of the sap. Whereever the elaborated sap passes, after touching this diseased region, it will carry its poison along with it, down the trunk, and by the lateral vessels, in toward the pith. We may suppose that a violence, which would destroy the health of the outer parts, would, to some degree, rupture the inner sap vessels. By this, or by some unknown way, the diseased sap is taken into the inner, upward current, and goes into the general circulation. If it be in a diluted state, or in small quantities, languor and decline will be the result; if in large quantities, and concentrated, the branch will die suddenly, and the odor of it will be that of frostbitten vegetation. All the different degrees of mortality result from the quantity and quality of the diseased sap which is taken into circulation. In conclusion, then, where, in one class of cases, the feculent matter was, in the fall, so virulent as to destroy the parts where it lodged, and was then dried by exposure to wind and sun, the branch above will live, even through the summer, but perish the next winter; and the spring afterwards, standing bare amid green branches, the cultivator may suppose

* Lindley's Horticulture, 81, 82.

the branch to have blighted that spring, although the cause of death was seated 18 months before. When, in the other class of cases, the diseased sap is less virulent in the fall, but probably growing worse through the spring, a worse blight ensues, and a more sudden mortality.

I will mention some proofs of the truth of this explanation.

The two great blight years throughout this region, 1832 and 1844, were preceded by a summer and fall such as I have described. In the autumns of both 1831 and 1843, the orchards were overtaken by a sudden freeze while in a fresh growing state; and in both cases the consequence was excessive destruction the ensuing spring and summer.

In consequence of this diagnosis, it has been found practicable to predict the blight six months before its developement. The statement of this fact, on paper, may seem a small measure of proof; but it would weigh much with any candid man to be told by an experienced nurseryman, this is such a fall as will make blight; to be taken during the winter into the orchard and told, this tree has been struck at the junction of these branches; that tree is not at all affected; this tree will die entirely the next season; this tree will go first on this side, &c., and to find afterwards the prediction verified.

This leads me to state separately the fact, that, after such a fall, blighted trees may be ascertained during the process of late winter or early spring pruning.

In pruning before the sap begins to rise freely, no sap should follow the knife in a healthy tree. But in trees which have been affected with blight, a sticky, viscid sap exudes from the wound.

Trees which ripen their wood and leaves early, are seldom affected. This ought to elicit careful observation; for, if found true, it will be an important element in determining the value of varieties of the pear in the middle and western States, where the late and warm autumns render orchards more liable to winter-blight than N. E. orchards. An Orange Bergamot, grafted upon an apple stock, had about run out; it made a small and feeble growth, and cast its leaves in the summer of 1843, long before frost. It escaped the blight entirely; while young trees, and of the same kind, I believe, standing about it, and growing vigorously till the freeze, perished the next season. I have before me a list of more than fifty varieties, growing in the orchard of Aaron Alldredge, of this place, and their history since 1836; and so far as it can be ascertained, late growing varieties are the ones in every case subject to blight; and of those which have always escaped, the most part are known to ripen leaf and wood early.

Wherever artificial causes have either *produced* or *prevented* a growth so late as to be overtaken by a freeze, blight has, respectively, been *felt* or *avoided*. Out of 200 pear trees, only four escaped in 1832, in the orchard of Mr. Reagan. These four had, the previous spring, been *transplanted* and had made little or no growth during summer or fall. If however, they had recovered themselves during the summer so as to grow in the autumn, transplanting would have had just the other effect; as was the case in a row of pear trees transplanted by Mr. Alldredge, in 1843. They stood still through the summer and made growth in the fall, were frozen, and in 1844 manifested severe blight. Mr. Alldredge's orchard affords another instructive fact. Having a row of the St. Michael pear—of which any cultivator might have been proud—standing close by his stable, he was accustomed, in the summer of 1843, to throw out, now and then, manure about them, to force their growth. Under this stimulus they were making excessive growth, when winter-struck. Of all his orchard, they suffered the ensuing summer the most severely. Of twenty-two trees, *twelve* were affected by the blight, and *eight* entirely killed. Of seventeen trees of the Bell pear, eleven suffered, but none were killed. All in this region know the vigorous habit of this tree. Of eight Crassane Bergamot—a late grower—five were affected and two killed. In an orchard of 325 trees of 79 varieties, one in seven blighted, 25 were totally destroyed. Although a minute observation was not made on each tree, yet as a general fact, those which suffered were trees of a full habit and of a late growth.

Mr. White, a nurseryman, near Mooresville, Morgan county, Ia., in an orchard of 150 to 200 trees, had not a single case of the blight in the year 1844; though all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week, than nursery soils in this county; and in the summer of 1843, his trees grew through the summer; wound up and shed their leaves early in the fall, and during the warm spell made no *second growth*. The orchard, then, that escaped, was one on such a soil as ensured an *early* growth, so that the winter fell upon ripened wood.

It may be objected that if the blight *began* in the new and growing wood, it would appear there; whereas the seat of the

evil, i. e., the place where the bark is diseased or dead, is lower down and on old wood. Certainly, it should be; for the returning sap falls some ways down before it effects a lodgement.

It may be said that *spring frosts* might produce this disease. But in the spring of 1834, in the last of May, after the forest trees were in full leaf, there came frost so severe as to cut every leaf; and to this day the dead tops of the beech attest the power of the frost. But no *blight* occurred that year in orchard, garden, or nursery.

It may be asked why forest trees do not suffer. To some extent they do. But usually the dense shade preserves the moisture of the soil, and favours an equal growth during the spring and summer; so that the excitability of the tree is spent before autumn, and it is going to rest when frosts strike it.

It may be inquired why fall-growing shrubs are not always blighted, since many kinds are invariably caught by the frost in a growing state.

I reply, first, that we are not to say that *every* tree or shrub suffers from cold in the same manner. We assert it of fruit trees because it has been observed; it must be asserted of other trees only when ascertained.

I reply more particularly, that a *mere frost* is not supposed to do the injury. The conditions under which blight is supposed to originate are, a growing state of the tree, a sudden *freeze* and sudden thawing.

We would here add that many things are yet to be ascertained before this theory can be considered as settled; as, the actual state of the sap after congelation, ascertained by experiment; the condition of sap-vessels, as ascertained by dissection: whether the congelation, or the thawing, or both, produce the mischief; whether the character of the season *following* the fall-injury, may not materially modify the malignancy of the disease; seasons that are hot, moist and cloudy, propagating the evil; and others dry and cool, restraining growth and the disease. It is to be hoped that these points will be carefully investigated, not by conjecture, but by scientific processes.

We have heard it objected, that trees grafted in the spring, blight in the graft during the summer. If the *stock* had been affected in the fall, blight would arise from *it;* if the scion had, in common with the tree from which it was cut, been injured, blight must arise from *it.*

Blight is frequently caused in the nursery; and the cultivator, who has brought trees from a distance, and with much expense, has scarcely planted them before they show blight and die.

It is objected, that while only a single branch is at first affected, the evil is imparted to the whole tree; not only to the wood of the last year, but to the old branches. I reply, that if a single branch only should be affected by fall-frost, and be so severely affected as to become a repository of much malignant fluid, it might gradually enter the system of the whole tree, through the circulation. This fact shows why *cutting* is a partial remedy; every diseased branch removed, removes so much poison; it shows also why cutting from *below* the seat of the disease—as if to fall below the haunt of a supposed insect—is beneficial. The further the cut is made from that point where the sap has clogged the passages, the less of it will remain to enter the circulation.

Trees of great vigor of constitution, in whose system but little poison exists, may succeed after a while in rejecting the evil, and recover. Where much enters the system, the tree must die: and with a suddenness proportioned to the amount of poison circulated.

A rich and *dry* soil would be likely to promote early growth, and the tree would finish its work in time; but a rich and *moist* soil, by forcing the growth, would prepare the tree for blight; so that rich soils may prevent or prepare for the blight, and the difference will be, the difference of the respective soils in producing an early instead of a late growth.

So long as the blight was believed to be of insect origin, it appeared totally irremediable. If the foregoing reasoning be found correct, it will be plain that the scourge can only be occasional; that it may be in a degree prevented, and to some extent remedied where it exists.

We should begin by selecting for pear orchards a warm, light, rich, dry and early soil. This will secure an early growth and ripe wood, before winter sets in.

So soon as observation has determined what kinds are naturally early growers and early ripeners of wood, such should be selected; as they will be least likely to come under those conditions in which blight occurs.

Wherever orchards are already planted, or where a choice in soils cannot be had, the cultivator may know by the last of August or September, whether a fall growth is to be expected. To prevent it, I suggest immediate *root-pruning.* This will benefit the tree, at any rate; and will probably, by immediately restraining growth, prevent blight.

Whenever blight has occurred, I know of no remedy but free and early *cutting*. In some cases it will remove all diseased matter; in some, it will alleviate only: but in bad blight, there is neither in this, nor in any thing else that I am aware of, any remedy.

There are two additional subjects with which I shall close this paper:

1. This blight is not to be confounded with *winter-killing*. In the winter of either 1837 or 1838, in March a deep snow fell in this region, and was immediately followed by brilliant sun. Thousands of nursery trees perished in consequence, but without putting out leaves, or lingering. It is a familiar fact to orchardists, that severe cold followed by warm suns, produces a bursting of the bark along the trunk; but usually at the surface of the ground.

2. I call the attention of cultivators to the disease of the peach tree, called "The Yellows." I have not spoken of it as the same disease as the *blight* in the pear and apple, only because I did not wish to embarrass this subject by too many issues. I will only say that it is the opinion of the most intelligent cultivators among us, that the yellows are nothing but the developement of the blight according to the peculiar habits of the peach tree. I mention it that observation may be directed to the facts.

HENRY W. BEECHER.

Philadelphia Agricultural Society--Report, &c.

AT a stated meeting of the Philadelphia Society for promoting Agriculture, held on the 1st of January, the following gentlemen were elected officers for the ensuing year.

DR. JAMES MEASE, *President.*

JAMES GOWEN, KENDERTON SMITH, } *V. Pres.*

AARON CLEMENT, *Rec. Secretary.*

P. R. FREAS, *Assistant Rec. Sec.*

DR. A. L. ELWYN, *Cor. Sec'ry.*

GEORGE BLIGHT, *Treasurer,*
In place of A. S. Roberts, declined.

ISAAC NEWTON, SAMUEL C. FORD, } *Curators.*

AARON CLEMENT, *Librarian.*

The following Report was read and adopted:

To the Philadelphia Society for promoting Agriculture.

The committee appointed to inquire into the existing laws to restrain gunners from trespassing upon farms and destroying birds in the county of Philadelphia, respectfully report:—

That by the Act passed the 9th of April, 1760, section 6th, If any person or persons shall presume to carry any gun, or hunt on any enclosed or improved lands of any inhabitant of this province, other than his own, unless he shall have license or permission from the owner of such lands, or shall presume to fire a gun on or near any of the king's highways, and shall be thereof convicted, either upon view of any justice of the peace within this province, or by the oath or affirmation of any one or more witnesses before any justice of the peace, he shall for every such offence forfeit the sum of forty shillings.

The 8th section enacts, That if any person shall hunt or kill any kind of game on the sabbath-day, and shall be convicted thereof in manner last aforesaid, every such offender shall forfeit and pay the sum of forty shillings for every such offence.

By the Act passed the 7th of March, 1821, if any person or persons shall presume to hunt on any improved or enclosed lands of any of the inhabitants of the counties of Philadelphia or Delaware, unless he or they shall have permission from the owner, occupier, or tenant, of such lands, or shall presume to fire a gun thereon, after being warned off by the owner, or person in his employ, or shall wilfully commit any injury to the orchard, garden, nursery, ground crops, vegetables, plants, land, or other matter or thing, growing or being thereon, or to or upon real or personal property of any nature or kind soever, every person so offending being thereof convicted, shall be liable to a penalty not exceeding ten dollars and the costs of conviction; and in default of payment to be committed to jail for any time not exceeding ten days.

The 2nd section enacts, That it shall be lawful for any constable or constables of the county of Philadelphia, to apprehend the person or persons so offending within the said county, and take him, or them, without a warrant, before the nearest justice of the peace within the township or district where the offence may have been committed, for the purpose of being dealt with according to the provisions of the first section of this Act. The penalty to be for the use of the poor of the township where the offence was committed.

By the Act passed April 11th, 1844, it shall not be lawful for any person in the counties of Philadelphia, Luzerne, Northampton, Bucks, Lancaster and Dauphin, to shoot, kill, or otherwise destroy, during the months of March, April, May, June, July,

and August, in each and every year thereafter, any robin, flicker, blue bird, woodpecker, sapsucker, thrush, or other insectiverous bird, under a penalty of five dollars for each and every offence.

By section 2nd, no person shall shoot or otherwise kill in the said counties, any pheasant between the first days of February and September; nor any partridge between the first day of February and the 20th of September; nor any woodcock between the 1st of January and the 1st of July; nor any rabbit between the 1st of February and the 15th of October, in any year hereafter, under a penalty of $10 for each and every offence; the sum or fine to be recovered before any alderman or justice of the peace, as debts of similar amount are by law recoverable, one half of the fine for the use of the informer, and the other half for the use of the county.

This Act shall not prevent any person or persons from shooting or otherwise killing game or insectiverous birds, on his, her, or their own property, at any season of the year.

This Act does not interfere with any existing law or laws, to prevent trespass or the firing of guns near public highways.

Farmers will see from these enactments of the legislature, that this body appreciates their wants in the matter before us, and most decidedly with equity, and even with stern severity, places its rebuke on the injuries done to them by lawless trespassers. Nothing appears wanting, as respects both the disposition and the action of the lawmakers of the State; they have done all that the agricultural community could ask, and more than enough to show how deep they conceive the wrongs to be, done by these persons to this large and respectable body of their fellow citizens, and how necessary they thought it to be to show their sense of the outrage, by the passage of strong penal enactments. That the laws are of no avail, that farmers still suffer and still complain, is no fault of the legislature; they have acted as if impelled by the healthiest public opinion, and no doubt did at the time of making these laws, as it is to be hoped they ever will, represent that portion of society which feels that it has rights of its own, and is in this way made to feel for those of others. The larger part of the State legislature are farmers, much the larger part of the remainder, men who represent agricultural districts; few are from large towns, and none perhaps, so far removed from the country, as not to be alive to its importance, or so far as to lose all sympathy with it. The agricultural community cannot then lose its authority, nor is it probable that its action upon the public mind will ever be so far diminished, as that any assembly of men will ever meet in the State and dare openly to do anything which is opposed to their wishes or their will; why is it then, that where the immense majority of our people are of one mind, and no opposition is or can be offered to them—why is it that this large and intelligent class, strong enough to upheave the whole basis of State action, still almost like children, complain of these petty annoyances and wrongs, committed too, by a worthless class of men, for whose correction these enactments were especially made, and for whose punishment the law is especially anxious. It would perhaps be an injustice, in all probability an untruth, to say that these wrongs and these annoyances were the fault of the agricultural community itself; that they and none others were responsible for this defiance of the law of which they complain, as well as for the deep injury done to the cause of morals, to the character of the institutions they love and sustain, to the cause of justice and the general esteem and character of the country. It would be too daring a proceeding to bring the larger portion of our fellow citizens thus under the ban, and to hold them up to execration and contempt, by this seeming trifling with laws so judicious, and so expressly made for their benefit; which they themselves acknowledge as just, and which they may be considered as having themselves framed. On whom then, must the responsibility of all this mischief be thrown? It must rest somewhere; the complaint is general; the evil must therefore be common. It may appear to some a trifling matter, that birds are killed—that fences are broken down in their pursuit—that walls are thrown over—that poultry is shot—orchards robbed—sheep and cattle worried and destroyed—woods set on fire—barns burnt—the farmer who acts in self-defence or offers a reproach, insulted. All this may appear to many, and especially to those living in cities, as matter not worthy of complaint or reprobation, and as bringing no charge on the general good condition of public sentiment and public morals. But those who feel the evil, may be allowed to feel very differently. They know not how to draw the line between one kind of robbery and another, between one species of violation of individual rights and another—between the burning of a barn in the country, and the burning of a house in the city—between assault and battery on a farmer, and the same upon a member of any other profession; nor between the menace of death from a ruffian who holds a musket to your

body, on your own soil and in sight of your own house and family, and the assassin who threatens your life in the streets of a town. Barns, orchards, cattle, poultry, are the farmer's property—his plate and his furniture; rob him of these, and you beggar him as certainly, as theft or fraud, one of any other occupation. He began life probably, with no capital but a strong arm, a brave heart, and a determination to follow the path of honest industry:—strip him of the result of these—take from him these representatives of a life of toil, and you bring him at once to despair and ruin. All will then admit the necessity of protecting such a class in every right and privilege, and they themselves can but acknowledge that they are protected, amply and fully, so far as the law can do it. Still they complain of serious outrages committed on their property, by those whom they say they cannot control or reach. And they are anxious to know what they can do, to prevent and put an end to them. They are the majority, and therefore rule; and the feelings of the rest of society are with them—what can they ask more! We are afraid that if not their timidity, it is their want of combination, that exposes them to the nuisance, and will continue to do so, until they rise as one man, and put it down by a vigorous exercise of the authority they so amply possess, and only want the inclination or the resolution to wield. Let them once make the effort, and the evil will disappear at once. No man or set of men, can bear the concentrated indignation of society, or endure its frown and rebuke, more especially when backed, as it is here, with the whole force of the law. We would therefore say to farmers, and to all who value and honour them, stir yourselves—point the whole vigor of opinion and the whole vengeance of the law on those who invade your privileges and your property, and you will soon find that the foot of the vagrant and the desperate offender will leave your soil, and dare to tread it no more. To this it may be replied, that farmers in the neighbourhood of large towns, are particularly exposed to trespass and depredation, that men issue from and retreat to them, without any possibility of tracing them. This is no doubt true. But we see no other immediate remedy than the one we have recommended—combination among the farmers, for the purpose of prosecution and punishment, with perhaps, the additional assistance of a person whose business and duty it shall be, during the season when farmers are most exposed to trespass, to be always at hand for the arrest of such persons. Frequent arrests will soon force them away, and they will at length not intrude upon another man's premises without first knowing his disposition, and whether they expose themselves to being dogged and brought to punishment by the law. Those who are so fortunate as to own valuable properties in the neighbourhood of large towns, are frequently obliged to endure the serious drawback of trespass and plunder. There is in all large towns, a class of lawless, idle, and desperate men, the very Ishmaels of society, who live by crime, and laugh at all the restraint the more orderly and better disposed impose in self-defence, and at all the law enacts. Whether there are more of this class in this country than in any other, or whether Philadelphia contains a more dangerous and vicious body of men than any other city, we are not prepared to say; but the fact is, that the people of our vicinity, farmers as well as others, complain loudly of robbery by day and night, and this committed by men from the city. There may be a defective moral sense and an inert public opinion, but legislatures and laws cannot meet these. In a country like ours, how can our legislative bodies be purer or better than those they represent! how can laws then be enacted, or if enacted, be enforced, when opinion does not uphold them, and our law-makers are themselves the law-breakers! If it be true that there is a large body of profligate and lawless villains existing among us, and at large, it is the fault of society, and society must take upon itself their punishment, or the consequences of its indulgence. The cause of this evil we believe to lie at our firesides and our homes. It comes from the want of good domestic training, from the want of proper parental control. The two chief elements of all good instruction, and the chief foundations of all moral education, the rod and the Bible, have been neglected or abused. They have failed in implanting good principles, in creating virtuous tendencies; and if in this condition of things, mild punishments are awarded to ferocious crimes, and the penitentiary and the halter are spared to open and undisguised villainy, society must expect outrage, violence, and in all probability, frequent commissions of crimes of a deeper and darker character. The committee would then respectfully say to farmers, and to all interested in the support of the rights of individuals—combine and act; and having as you no doubt have, the whole force of public opinion to back you, men would as soon enter on your premises with any evil intent, as they would make a voluntary incarceration within the walls of a jail or the cell of a penitentiary.

ALFRED L. ELWYN, *Chairman.*
ISAAC W. ROBERTS,
ISAAC EWTON.

Dec. 4th, 1844.

Change of Colour in Oleander.

Editor of F. Cabinet,—On Thursday last I came to the city, and on my way stopped at Shugart's tavern, in Flourtown, and was shown an *Oleander tree*, at present in his dining room, and bearing two pure *white* flowers, which are the first and only white flowers the tree ever produced—it is a very fine specimen of the Oleander, and has hitherto produced *red* flowers, and in great profusion. Is not this something remarkable, and will you or some of your numerous readers, favour a subscriber to the Cabinet, with the philosophy of this, which may prove also interesting to many of your readers, and amateurs in horticulture.

Lehigh.

Philadelphia, Dec. 20th, 1844.

We suppose the plant mentioned above, must have been kept during the time of flowering, very much in the shade, and a good deal in the dark. This would have a tendency to whiten the flowers. We apprehend the next crop of flowers, if the plant be kept exposed to the light of the sun, will be of the usual red colour.—Ed.

Cure for the Distemper in Cattle.—I cannot resist giving a receipt for the treatment of beasts that may take the prevalent distemper. It showed itself last winter in one of my yard stock, by discharging abundant saliva from the mouth, with sore and inflamed tongue and gums, no appetite, confined bowels, and very hot horns. I desired the bailiff to give him one half-pint of the spirit of turpentine, with one pint of linseed oil, repeating the oil in twenty-four hours, and again repeating it according to the state of the evacuations. At the end of twenty-four hours more, the bowels not having been well moved, I repeated both turpentine and oil. In two days the beast showed symptoms of amendment, and in three or four took to his food again, and did perfectly well. All the yard beasts and two of the fattening beasts have had it, and all have been treated in the same manner, with perfect success. Little beside oatmeal gruel was given.—*Quarterly Journal of Agriculture.*

Young Trees.—An excellent mode for preventing young fruit trees from becoming hide bound and mossy, and for promoting their health and growth, is to take a bucket of soft soap, and apply it with a brush or old cloth to the trunks from top to bottom; this cleanses the bark and destroys the worms or the eggs of insects, and the soap becoming dissolved by rains, descends to the roots and causes the tree to grow vigorously.

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, First Month, 1845.

To a friend at Norristown, who wishes information as to where Cranberry bushes may be obtained for transplanting, we can only say, that they will probably not be procured short of the Cranberry regions of Burlington or Monmouth counties, in New Jersey, or in the New England States. This fruit is frequently propagated from the seed, though this method would require a year or two more to bring the bushes into bearing. The following from an Eastern paper, may throw some light on the subject:

"Mr. William Hall, who resides in the north part of this town, sent us last week, a box of Cranberries, as large and as fine as we ever saw. We understand that they grew on a little patch of boggy land, which bore only weeds and rushes—and that a few years since, Mr. Hall having some Cranberries which were brought from the westward, sowed some of them in the spring, upon the snow and ice. The seed took well, and has entirely rooted out the weeds, and last year he gathered about six bushels of Cranberries from a patch of land about three rods square, which a few years since was entirely profitless.

"The Massachusetts Ploughman states that a man in that State, has sold the Cranberries on a piece of land not exceeding one-eighth of an acre, for fifty dollars, the purchaser to gather the fruit. We have long been aware that this berry was easy to cultivate, as well as profitable; but have never known an instance of their having been raised by sowing in the manner pursued by Mr. Hall—and we recommend to all who have such patches of ground, to make trial of it. The expense is little or nothing if it fails—the profit is great if it succeeds."

We perceive by the last number of the *Central New York Farmer*, heretofore published at Rome, Oneida co., New York, that it is about to be discontinued and united with the *Cultivator*, at Albany.

The *Washington County Post*, published at Salem, New York, of the 25th ult., gives a detailed account of the proceedings of the Agricultural Society, at its Annual Fair and Cattle Show, in the Ninth month last. From the large number of premiums awarded, both on account of crops and various kinds of stock, it is evident there is in Washington county, a lively interest in every thing pertaining to the thrift and welfare of the farmer. Eighty-three and a half bushels of corn—the large Dutton—and seventy-nine and a half bushels of oats, carried off the premiums for those crops. One of the committees makes some very judicious remarks in relation to the value of the cow, particularly to the poor man, who, if he is able to keep a good one, has every day manufactured, both morning and evening, for his own use and that of his family, one of the most nutritious substances afforded by animals or vegetables.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$4 00
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
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Complete sets of the FARMERS' CABINET, half-bound, 8 vols.	6 50
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SKINNER'S CATTLE DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
JOHNSTON'S Agricultural Chemistry,	2 25
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½

As well as his larger works on Chemistry and Agriculture.

Subscriptions will be received for Colman's Agricultural Tour in England and on the Continent.

☞ We are prepared to bind books to order.

From a late number of the *New England Farmer*, we perceive that our highly valued friend, J. S. Skinner, of Washington, is about to take charge of the Agricultural and Horticultural department of the *New York Albion*. This is a paper of great respectability and wide circulation, both in this country and in England, and we have particular satisfaction in learning that the individual referred to, will thus have an opportunity, under the responsibilities of this connection, to throw before the public the results of his long experience and practice, and doubt not that the portion of his own enthusiasm, which he will be able to infuse into the public mind in relation to his favourite pursuit, will have a wholesome influence. When five and twenty years ago, he established the American Farmer in Baltimore, mainly for the public good, and as a medium for the outpourings of his own mind on agricultural matters, how meagre were the resources of the farmer, to which he could refer for information in any department of his business in which he felt that he needed instruction. What a change has been effected in the *Press* of the country—and what a still greater change has there been in the character of our agriculture. The steam engine has hardly infused more life into our workshops, or more wonderfully multiplied the conveniences which have been thrown within reach of every department of society, than the general diffusion of agricultural knowledge by our agricultural papers, has improved our modes of farming—increased the productiveness of our lands, and consequently added to the comforts of those who occupy them. These are facts which we are aware are occasionally brought forward by our agricultural papers, but we fear they are too frequently passed over by their readers, with scarcely an acknowledgment of their truth. They are stubborn facts nevertheless, and should go far to convince every patriotic man that it is his duty to lend his support to a good Agricultural paper, even though he may neither get his living at the plough-tail, nor be directly interested in the management of a single acre.

To many of our subscribers who are in arrears, we this month send their bills. Attention is particularly invited to them; and they may be reminded that Postmasters are at liberty by law, to frank remittances to publishers in payment of subscriptions, as well as to receive new subscribers and remit payment. Our friends are invited to avail themselves of this mode of settling our numerous little demands. Our expenses are necessarily heavy, and continual. It is only asked of each of our subscribers, promptly to bear his *small* part in their payment, and to do all he can in adding to the number on our subscription list. It gives the editor much pleasure to avail himself of this opportunity to acknowledge his strong obligations to the kindness and courtesy of the Post-masters of the country, from Canada to Florida, and f om New Jersey to the Cherokee Nation. He respectfully solicits a continuance of this kindness.

COLEMAN'S AGRICULTURAL TOUR IN EUROPE.

It will not be forgotten that subscriptions to this work, are received at the office of the Farmers' Cabinet; where every farmer in the country will be heartily welcome as a subscriber to both, or either of these publications. Single Numbers will be sold.

The first number of a new volume, in neat quarto form, of the American Rail Road Journal *and General Advertiser for Rail Roads, Canals. Steamboats, Machinery and Mines*, published in New York by D. K. Minor, editor and proprietor, has been received. It will henceforth appear weekly, at three dollars a year. We have long been in the habit of looking over the numbers of this work as they have regularly appeared, for a record of all that is valuable in relation to the matters on which it professes to treat. The industry and business talent of its editor, aided as he is, by scientific and practical men, will enable him to make his Journal every way important to those who are connected with the great internal improvements of our country.

A new series of the *New York Farmer and Mechanic*, in newspaper form, to be published weekly in New York, has been commenced with the year. In addition to much agricultural and miscellaneous matter, it will be made the channel of communication for those interested in the silk cause.

☞ SHORT ADVERTISEMENTS. ☜

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line.

PHILADELPHIA SEED STORE,

No. 23 MARKET STREET.

M. S. Powell keeps a constant supply of Clover and other Grass Seeds. Field Seeds, consisting of prime Seed wheat, Buckwheat, Millet, Oats, Corn, Rye, &c.

☞ GARDEN AND BIRD SEEDS generally.

July 15th, 1844. tf.

PHILADELPHIA AGRICULTURAL, HORTICULTURAL, AND SEED WAREHOUSE.

No. 194½ Market street, between Fifth and Sixth streets, South side.

For sale as above, at wholesale and retail, a complete assortment of Farming tools, among which may be found *Horse-powers and Threshing Machines, Grain and Seed Fans* of various patterns. *Corn-shellers* in variety. Hay, Straw, and Corn-stalk Cutters, eight different patterns, from $4 50 to $30. Corn-stalk Cutters and Grinders—Churns—Cheese-presses, &c. *Centre-draught Ploughs* of eight sizes. Bill-hooks—Bramble Scythes—Grubbing Hoes—Axes and handles—Hatchets—Potatoe Hooks—complete sets of instruments for making capons.

Garden, Grass, Flower and *Field seeds*, warranted fresh and true to name. D. O. Prouty.

POUDRETTE—a valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, N. Fourth street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels—$5 for three barrels—$15 for ten barrels, or thirty cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. We were entirely unable last spring to supply the demand, though it was then but an experiment in this vicinity. The results on corn have been generally very satisfactory. Early applicants will be most certainly supplied. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. Josiah Tatum.

The quantity of rain which fell during the Twelfth month, 1844, was two and three-quarter inches. And the quantity which fell during each month of the past year, was as follows:

Months.	Inches.
1st,	4.032
2nd,	1.449
3rd,	4.430
4th,	1.354
5th,	3.091
6th,	3.351
7th,	5.284
8th,	3.400
9th,	4.030
10th,	5.025
11th,	2.950
12th,	2.750
Fell during the year 1844,	41.166
There fell in 1843,	46.912

And the average for the last twenty years, was 42.122 inches.

Penn. Hospital, 1st mo. 1st.

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For six dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the ninth volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

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Joseph Rakestraw, Printer.